THE

Croonian Lectures

ON

FUNCTIONAL DERANGEMENTS OF THE LIVER.

Delivered at the Royal College of Physicians,

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LECTURE I.—PART I.

Notice of Dr. Croone.—Present Notions as to Functional Derangements of Liver unsatisfactory.—A. FUNCTIONS OF THE LIVER IN HEALTH. *Historical Sketch; Galen's Views; Obsequies of Liver by Bartholin; Modern Views; Functions of Liver threefold.* I. *Sanguification and Nutrition.* II. *Disintegration of Albuminous Matter.* III. *Secretion of Bile; Composition, Origin, Quantity, and Uses of Bile.—B.* FUNCTIONAL DERANGEMENTS OF LIVER. *Objections to existing Classification; Proposed Classification.* I. *Abnormal Nutrition.* (1) *Corpulence;* (2) *Emaciation.* (*a*) *Deficiency of Bile;* (*b*) *Diabetes;* (*c*) *Other Varieties of Emaciation.* II. *Abnormal Elimination; Symptoms of Retained Bile; Cholestearæmia.*

MR. PRESIDENT, FELLOWS OF THE COLLEGE, AND GENTLEMEN,—It may interest some of you if, by way of preface, I say a few words respecting the founder of the course of lectures which I am honoured by delivering before you. For the particulars I am indebted to the "Roll" of the College, edited by our learned colleague Dr. Munk.

Dr. William Croone was born in London, and educated at Emanuel College, Cambridge. He became a Fellow of this College on July 29th, 1675, and was Censor in 1679. In 1659 he was elected Professor of Rhetoric at Gresham College; and shortly afterwards he was made secretary to the Royal Society, which then held its meetings in Gresham College. He resigned his professorship in 1670, on being appointed Lecturer on Anatomy at Surgeons' Hall. He died in 1684, and was buried in the churchyard of St. Mildred's, in the Poultry. He left behind him a plan for two lectureships, which he had designed to found: one course of lectures to be read before the College of Physicians, after a sermon to be preached in the church of St. Mary-le-Bow; the other to be delivered yearly before the Royal Society, upon the nature and laws of muscular motion. His will contained no provision for the endowment of these lectures; but his widow (a daughter of Alderman Lorimer, who subsequently married Sir Edwin Sadleir, Bart.) carried out his intention by devising in her will the King's Head Tavern, Lambeth-hill, Knight Rider-street, in trust to her executors, to settle four parts out of five upon the College of Physicians, for the purpose of founding the annual lectures, now known as the Croonian Lectures, and the fifth part to found the Croonian Lecture of the Royal Society. A fine portrait of Dr. Croone was presented to the College in 1738 by Dr. Woodford, Regius Professor of Physic at Oxford, and is now suspended in the Censors'-room.

The founder of these lectures made no restriction as to their subject, as he did with regard to the lecture before the Royal Society; and it has been customary for each lecturer to select some subject in practical medicine which his experience has been most calculated to elucidate. The subject which I have chosen is one which it appears to me is well worthy of the attention of this College, and of medical men in general—namely, the Functional Derangements of the Liver. Professional opinion as to what constitutes functional disorder of the liver is vague and unsatisfactory. There is no expression more common among both patients and their doctors than that the "liver is out of order," or that certain symptoms are due to "biliousness," and yet few medical writers have undertaken to define with accuracy what symptoms are referable to a disordered liver. It is to be feared that symptoms are sometimes referred to the liver with which it has little or no concern; while, on the other hand, there are grounds for suspecting that many symptoms, at first sight apparently referable to other organs, and even grave degenerations of tissue and organic disease, not only of the liver itself, but throughout the body, may be traced back to functional derangements of the liver, although some of these may as yet be imperfectly understood. It is remarkable how systematic writers on medicine, and on diseases of the liver in particular, entirely ignore the subject of functional disorders of the liver. The remarks which follow must be regarded as a feeble attempt to sketch with the light of recent investigation those symptoms and morbid conditions which may fairly be put down to a disordered liver. They do not pretend to place the subject upon a firm and lasting basis; but, by calling attention to its importance and provoking discussion, it is hoped that they will prove a stepping-stone to a more certain knowledge of it, and in the meantime that they will help to supply what appears to be a deficiency in medical literature.

A.—FUNCTIONS OF THE LIVER IN HEALTH.

Before proceeding to discuss the results of derangement of the liver, it will be necessary for me to refer at some length to the functions of the organ in its healthy state. As in the case of the pathology of pyrexia and of inflammation, so with regard to the healthy functions of the liver, it is not a little remarkable that modern investigations have tended to reproduce in a scientific form certain crude opinions entertained by the earliest writers on medicine. From its large size, and from the extensive system of blood-vessels connected with it, the liver was believed to be the seat of many most important functions, and to be, in fact, the central organ of vegetative life. Galen, for example, taught that the liver was the centre of animal heat, that it was the seat of sanguification, and that it was the starting-point of the venous system. He assigned to the veins distributed over the intestines the function of imbibing the fluid nutriment, and of conveying it by the vena portæ to the liver, where he supposed that the processes of sanguification and of the generation of animal heat took place. He then traced the passage of the blood through the hepatic veins to the heart, and hence he regarded the liver as the starting-point of the venous system. For upwards of sixteen centuries these views of Galen—more or less modified—were generally accepted by physiologists and physicians, and as late as the seventeenth century they were in the main upheld by our own Harvey. But the discovery in the first half of the seventeenth century of the lacteals and thoracic duct showed that chyle was conveyed to the blood independently of the portal vein and of the liver. The result was that this organ at once fell from its high estate, and ceased to be regarded as serving any purpose in sanguification. Thomas Bartholin, in his "Defence of the Lacteals and Lymphatics against Riolanus," wrote for the liver an epitaph, in which the end of its dominion was announced, and its function was declared to be henceforth limited to the secretion of bile.

"Vivit, floretque pro bile separandâ, sed, si sanguinem conficiendum spectemus, funeratum creditur. Ivimus illi exsequias, nunquam redituro. Nam.....

'Facilis descensus Averni,
Sed revocare gradum, superasque evadere ad auras,
Hoc opus, hic labor.'"*

Although it was *à priori* improbable that the largest gland in the body, deriving large supplies of blood from different sources, as well as holding peculiar relations to the blood returning from the placenta in the fœtus and from the stomach and intestines in the adult, should have as its sole function the secretion of a fluid which is apparently of less importance in digestion than the gastric or pancreatic juice, yet for nearly two centuries the only object of the liver was believed to be the secretion of bile; and down to the present day its functional derangements are constantly spoken of as restricted to the secretion of bile abnormal in quantity or in quality. For example, our late learned colleague, Dr. Copland, one of the few modern medical authors who has discussed the functional disorders of the liver, describes them as coming under three heads—viz.: 1. Diminished secretion of bile. 2. Increased secretion of bile. 3. Secretion of morbid or altered bile.† And this classification pro-

* Defensio vasorum lacteorum et lymphaticorum adversus J. Riolanum. Hafniæ, 1653, p. 6.

† Medical Dictionary, ii., 722.

bably represents with tolerable accuracy the views of the great majority of modern practitioners of medicine. It is the belief that the sole function of the liver is the secretion of bile which has given rise to the expression in common use by professional men as well as laymen, that the "liver will not act," when all that is implied is a constipated state of the bowels. But the physiological investigations made within the last quarter of a century have in a great measure restored the liver to its former place of importance in the animal economy; they have shown that the secretion and excretion of bile are far from being the most, if they be not the least, important of its functions; and they have consequently added to the number of its functional derangements.

I. In the first place, it is now known that the liver is one of the organs mainly concerned in the process of sanguification. So long ago as 1820 it was shown by Magendie and Tiedemann that the absorption of nutritive matters from the bowel was not limited to the lacteals, but that part was taken up into the blood through the portal vein;* and the researches of subsequent physiologists have clearly established that the liver exercises most important functions in assimilation and nutrition. The most valuable contributions towards our knowledge of this matter have been the researches of Claude Bernard and other observers, who have shown that the liver has the power of making and storing up for a time within its cells glycogen ($C_6H_{10}O_5$), a substance resembling dextrin ($C_6H_{10}O_5$) in its chemical composition and reactions, and, like it, capable of conversion into sugar by the action of albuminoid ferments. This substance always exists in the liver in larger amount during digestion than during fasting, attaining its maximum usually about four or five hours after a meal. It does not yet seem certain what the materials are from which it is mainly formed, but there can be no doubt that its amount is increased by the use of starchy or saccharine food. The starch ($C_6H_{10}O_5$) of the food is believed to be converted into grape-sugar or glucose ($C_6H_{12}O_6$) by the saliva and pancreatic secretion, while the cane-sugar ($C_{12}H_{22}O_{11}$) is transformed by the intestinal secretion into grape-sugar and another form of sugar called lævulose ($C_6H_{12}O_6$). The glucose and lævulose are absorbed by the intestinal veins, and carried by the portal vein to the liver, where they are converted partly perhaps into fat, but mainly into glycogen, which is stored up in the hepatic cells, and distributed for the nutrition of the tissues during the intervals of fasting. The circumstance, however, of glycogen being formed in considerable quantity in the livers of animals who have been fed for a month or more on flesh alone, and the fact that its quantity in the liver of a dog is always increased after a meal of flesh, show that it can also be produced from albuminous matter. The albumen of the food is converted by the gastric juice into peptone, which is also absorbed by the intestinal veins and carried to the liver, where it is believed to be decomposed into glycogen and nitrogenous products, such as leucin ($C_6H_{13}NO_2$) and tyrosin ($C_9H_{11}NO_3$), which are ultimately resolved into urea (CH_4N_2O).† The glycogen derived from these two sources does not remain long in the liver, for the large quantity formed after a meal is quickly diminished on fasting. It is not got rid of by the bile-ducts, for bile contains neither glycogen nor sugar. But either as glycogen, or more probably as sugar,‡ into which it is believed by Bernard and most other physiologists to be reconverted through the action of an albuminoid ferment in the liver, or in the blood, or transformed in some other way, it enters the blood by the hepatic veins.

One object of the glycogenic function of the liver is supposed to be that of continuously supplying an easily oxydisable material, such as sugar, which in the presence of oxygen and albuminous matter is readily converted in the lungs into carbonic acid and water, and thus contributes to the maintenance of animal heat. But although there is still some difference of opinion among those most competent to judge, the bulk of evidence goes to show that a portion only of the glycogen formed in the liver is transformed into sugar to be burnt in the lungs, and that the maintenance of animal heat is far from being its chief use. There are good grounds for believing that it assists in cell-growth, for, just as in plants the presence of sugar seems to be necessary for the most rapid development of cells, so in animals glycogen can be found wherever cell-growth is actively going on. Bernard and Rouget have found it in abundance in the cells of the placenta and amnion, and Rouget in many fœtal tissues, such as cartilage, muscle, and the epithelial cells of the skin;* and it is also present in the inflammatory products of pneumonia, and in new growths whenever cell-formation is active. Hoppe Seyler has also shown that it is an ingredient of colourless blood-corpuscles, so long as they are active, but that when they lose their power of motion, the glycogen disappears and is replaced by sugar.† In connexion with these observations, it is important to note that the blood, on emerging from the liver, is much denser, and contains a far larger proportion of solid constituents (although less fibrin), and is also far richer in white blood-corpuscles, than the blood before it enters the liver. Bernard, Lehmann, and McDonnell ascertained that in blood drawn from the hepatic vein the colourless corpuscles are from five to ten times more numerous than in blood taken from the portal vein;‡ while Hirt of Zittau estimated that the proportion of the colourless to the red corpuscles was in the portal venous blood as 1 to 524, but in the hepatic as 1 to 136.§ The red corpuscles also from the hepatic vein are said to have a sharper outline and less tendency to aggregate into rolls, and to dissolve less readily in water, than those from the portal vein. Again, we have the remarkable observations of Weber, confirmed by Kölliker, respecting the extensive generation of blood-corpuscles in the liver of the embryo. In the early stages of fœtal life the blood-cells multiply throughout the entire mass of the blood, but when the liver begins to be formed this process ceases, and a very active formation of colourless blood-cells is set up in the liver, these colourless cells undergoing a gradual change by the development of colouring matter in their interior into red corpuscles. According to Kölliker, this new formation of blood-corpuscles in the liver continues during the whole of the fœtal life of mammalia.‖ The observations quoted above make it probable that the liver in the adult continues to perform the functions which pertain to many different tissues of the fœtus; the glycogen secreted in its cells combining with nitrogen, and forming an azotised protoplasm, which maintains the nutrition of the blood and tissues. Dr. R. McDowell has suggested that part of the glycogen of the liver combines with nitrogen furnished by the fibrin of the blood, which is disintegrated in its passage through the liver, and that the result is a new protein substance which enters the circulation.¶ Our colleague Dr. Pavy is also of opinion that glycogen is capable of transformation into fat. As he contends, it is beyond dispute that starch and sugar introduced with the food lead in the animal system to the production of fat, while his experiments have shown that the ingestion of these principles is followed by a marked increase in the amount of glycogen

* Versuche über die Wege auf welchen Substanzen aus dem Magen und Darm Canal im Blut gelangen. Heidelberg, 1820.

† See Fick in Pflüger's Archiv, vol. iv., p. 40; also Schultzen and Nencki, Zeitschrift für Biologie, vol. viii., p. 124.

‡ In reference to the difference of opinion still existing on this matter, Dr. Brunton writes as follows, in Sanderson's Handbook for the Physiological Laboratory, 1873, p. 508:—"While Bernard considers that the formation of sugar goes on in the liver constantly during life, this has been denied by Pavy, Ritter, Meissner, and Schiff, who hold that it only occurs after death, or under pathological conditions, such as disturbance of the respiration or circulation during life. They base their opinions on the observations that the liver contains little or no sugar when examined immediately after death, and that the blood of the hepatic vein does not contain more sugar than that of the portal or jugular veins. It is quite true that sugar is found in very small amount in fresh livers; but the smallness of the quantity is in all probability due to the constant circulation through the liver during life washing the sugar out of it as soon as it is formed (Flint). The statement, that the blood of the portal contains as much sugar as that of the hepatic vein, rests on experiments vitiated by the omission to place a ligature on the former while removing the liver, so that, the hepatic vein having no valves, the blood from it flowed back into the portal system. When this fallacy is avoided, sugar is found in much larger proportion in the hepatic than in the portal vein. To meet the objection that sugar thus found has been formed after death, blood has been taken from the right side of the heart, or vena cava, and the quantity of sugar it contained compared with a similar specimen of blood from the jugular vein. Every precaution was taken to avoid disturbance of the circulation, yet the sugar in the former was found to exceed that in the latter considerably. (Lusk)."

* Journal de Physiologie, 1859, tome ii.

† Med. Chem. Untersuch., 1871, p. 486.

‡ See McDonnell's Observations on the Functions of the Liver. Dublin, 1865.

§ Müller's Archiv, 1865, and Carpenter's Principles of Human Physiology, seventh edition, p. 228.

‖ Todd and Bowman's Physiology, 1856, ii., 263; Carpenter's Principles of Human Physiology, seventh edition, 1869, p. 214; and Kölliker's Manual of Human Histology, Sydenham Society edition, 1854, vol. ii., p. 342.

¶ Op. cit.

in the liver.* The production of glycogen, then, may be regarded as the first step in the assimilation of the starchy and saccharine elements of our food; and as these elements are known to proceed on to fat, glycogen would seem to occupy a position intermediate between the two. The process of assimilation may go on to the production of fat in the liver, or it may stop short at the formation of another principle, which escapes from the liver and is elsewhere transformed into fat. Lastly, there are good grounds for thinking that both glycogen and sugar serve some purpose in muscular action; at all events it has been found that the quantity of sugar in blood becomes greatly diminished in passing through the vessels of contracting muscles.† According to Bernard, this destruction of sugar in muscle is due to lactic fermentation. ‡

There may be other ways in which the liver contributes to assimilation and the nutrition of the body; but enough has been said to justify us, notwithstanding the prediction of Bartholin, in restoring to the organ the important function claimed for it by Galen and his successors—namely, that of sanguification.

II. But, in the second place, modern research has made it probable that the liver is endowed with a function not suspected by Galen, and which, from a pathological point of view, is even more important than that which we have been considering. Many observations, pathological as well as physiological, point to the conclusion that the liver is not only a blood-forming but a blood-destroying or purifying organ, and that it contributes in a great degree to the destruction of albuminous matter derived from the food and textures, and the formation of urea and lithic acid, which are subsequently eliminated by the kidneys. First, there seems to be little doubt that the albumen and fibrin of the blood become largely disintegrated in the liver. Lehmann and Bernard have shown that, while portal blood contains much fibrin, blood from the hepatic vein contains little or none.§ Brown-Séquard has calculated that no less a quantity than 2690 grammes, or about 86¼ oz., of fibrin is daily lost to the blood in its passage through the digestive organs and the liver.‖ If this be so, we can readily understand that, when anything occurs to interfere with this fibrin-destroying function, there should be a rapid increase of fibrin in the blood, as we know to occur in acute rheumatism and in other diseased states. Moreover, there are grounds for believing that, while white blood-corpuscles take their origin in the liver, the red corpuscles are destroyed there, and that the nitrogenous colouring matters of the urine are partly the result of this destructive process. Gréhaut has ascertained that there is a positive destruction of hæmoglobin in the passage of blood through the liver.¶ Red blood-corpuscles are known to be at once destroyed when brought in contact with a solution of bile-acids of a certain strength (12 per cent., Legg),** while the researches of our late colleague, Dr. Bence Jones, make it very probable that the various shades of yellow, brown, and pink presented by the sediments of the urine are due to different degrees of oxidation of the pigment of the bile.†† But, secondly, there is evidence that the liver is largely concerned in the formation of the nitrogenous matters which are eliminated by the kidneys. 1. There is the well-known fact, to which I shall have occasion to refer again in more detail, that, among the most constant signs of functional derangement of the liver, is an imperfect formation of urea, evidenced by the deposit of lithic acid or lithates, and of a dark colouring matter closely allied to lithic acid, in the urine. 2. When a great part of the liver has been destroyed by disease, the urea discharged in the urine becomes greatly lessened, or it entirely disappears. For example, when a great part of the liver has been destroyed by cancer, there has been found to be a remarkable diminution of urea.* Thirty years ago, our colleague, Dr. Parkes, examined the urine in a number of cases of hepatitis and hepatic abscess in India, and found that in some instances there was abundance of urea, and in others scarcely any, while in some it was altogether wanting. The cause of the difference appeared to be the amount of suppuration. When this was excessive, so that the secreting substance of the liver was almost entirely destroyed, the amount of urea was greatly lessened, and in a degree proportioned to the extent to which the glandular tissue was destroyed by the abscess; and, on the contrary, when the liver was not suppurating, but was actively congested and enlarged, so that there was an increased activity of the secreting cells, the amount both of urea and lithic acid was increased.† Again, in that singular malady, acute atrophy of the liver, when every secreting cell of the liver becomes rapidly disintegrated, all trace of urea may disappear from the urine, its place being taken by albuminoid substances less oxidised, such as leucin and tyrosin, which are also found in large quantity in the hepatic tissue, as if they marked the arrest or modification of the transformation of albumen.‡ Lastly, there are grounds, to be referred to presently, for believing that, when cerebral symptoms supervene in any case of protracted jaundice with destruction of the liver, they are not due, as has been commonly thought, to saturation of the system with bile, but to non-elimination of urea. From these observations it is clear, as Meissner has argued, that "withering and destruction of the liver-tissue is connected with an important diminution in the formation of urea"§ 3. There is experimental evidence that urea exists in large quantity in the liver, and that it is formed there. Dr. Parkes, in the Croonian Lectures for 1871,‖ informed us that the experiments of Heynsius and Stokvis, followed up by those of Meissner, Bullard, Perls, and others, had placed on a certain experimental basis the fact that urea can be largely found in the liver; while the more recent observations of Cyon seem to prove that there is an actual production of urea in the liver. Cyon ascertained, on analysing blood obtained by introducing tubes into the portal and hepatic veins of dogs, that the blood from the latter vessels always contained much more urea than that from the former. In one experiment the blood from the portal vein contained only ·08 gramme of urea in 100 cubic centimetres; but, after passing through the liver once, it contained ·14 gr., and, after passing through the liver four times, 0·176 gr. He satisfied himself also that this increase was not due merely to washing out the liver, but that there was an actual formation of urea.¶ It is important to add that the formation of urea in the liver is always greatly increased after food. Lithic acid has also been found repeatedly in the liver of man and mammalia, but always in small quantity; whereas, in birds, in which lithic acid takes the place of urea as the great eliminator of nitrogen, it also takes the place of urea in the liver, as it probably also does in the human liver under certain pathological conditions.

All these observations point to the liver as being largely concerned in the destructive metamorphosis of albuminoid matter, the products of which are eliminated by the kidneys, although it is not improbable that other glandular organs, and even the corpuscles in the circulating blood, as believed by H. Ludwig and Fuhrer,** may contribute to the process.

As might have been expected, these oxidising and disintegrative processes, as well as those connected with the formation of bile, are attended by a production of heat. The average temperature of the body generally being between 98° and 99° Fahr., the temperature of the healthy liver reaches 104°, or even, according to Bernard, sometimes 106°.†† Bernard has also shown that in dogs the temperature of the blood in the hepatic veins is considerably higher than that of the blood of the portal vein. As heat is absorbed during

* F. W. Pavy: The Nature and Treatment of Diabetes, second edition, 1869, p. 113.

† Sanderson's Handbook for the Physiological Laboratory, 1873, p. 508.

‡ Lectures delivered at the College of France, London Medical Record, October and November, 1873.

§ McDonnell, op. cit., p. 29. G. Budd: Diseases of the Liver, 3rd ed., 1857, p. 47.

‖ Journal de Physiologie, i., 304.

¶ Sanderson, op. cit., p. 498.

** Kuhne, Archiv für Path. Anat., 1858, Bd. xiv. p. 334; Robin, Mémoires lus à la Société de Biologie pendant l'année 1857; and Dr. J. W. Legg, Bartholomew's Hosp. Rep., vol. ix., 1873.

†† G. Budd, op. cit., p. 34; Sanderson, op. cit., p. 499. "The very close resemblance of urine-pigment to bilifulvin is strongly suggestive of an hepatic origin.....An argument in favour of a liver origin may perhaps be drawn from the effect of liver diseases on the urinary pigment." (Parkes on the Urine, 1860, p. 30.)

* Parkes on the Urine, 1860, p. 330.

† On the Dysentery and Hepatitis of India, by E. A. Parkes, 1846.

‡ Frerichs' Klinik der Leberkrankheiten, New Sydenham Society's Translation, vol. i., p. 221; Murchison, Clinical Lectures on Diseases of the Liver, 1868, p. 229.

§ Henle's Zeitsch. für rationelle Medicin, Bd. xxxi., p. 246.

‖ THE LANCET, 1871, vol. i., p. 469.

¶ Centralblatt für die Med. Wissenschaften, August 1870, p. 580.

** Parkes, THE LANCET, 1871, vol. i., p. 470.

†† On the Heat of the Body. The Gulstonian Lectures for 1871, by Dr. S. Gee. British Medical Journal, 1871, vol. i., p. 330.

organisation, and given off during disintegration, the high temperature generated in the liver makes it probable that the disintegrative processes taking place in the gland are in excess of the formative. It follows, therefore, that the precise observation of modern times has confirmed the statement enunciated centuries ago by Galen, that the liver is a great centre of animal heat.

III. The third function of the liver is the secretion of bile. The composition of this substance is complex, and its uses are not yet sufficiently known. Human bile, as found after death, is usually a dark-brown fluid, of tenacious consistence, from the presence of mucin, which it derives from the gall-bladder and bile-ducts; but when fresh, as it flows from the liver, it is a thin transparent liquid, of a golden-yellow colour, like that of yelk of egg, of a very bitter taste, of alkaline reaction, and having a specific gravity of about 1018. It has an unctuous feel, and mixes freely with oil or fat. It contains from 9 to 17 per cent. of solid matters (the proportion being always greater soon after a meal), consisting for the most part of substances peculiar to bile. Excluding the mucin, its principal ingredients are—1. Bile-pigment. 2. Biliary acids combined with soda. 3. Cholesterin and fats. 4. Mineral matter, such as phosphates of soda, potash, lime, magnesia, and iron, chloride of sodium, and traces of copper.

The following analysis of bile obtained from a man aged twenty-two, killed by an injury, was made by Frerichs.

Water	859·2
Solid residue	140·8
Glycocholate of soda) Taurocholate of soda)	91·4
Fat	9·2
Cholesterin	2·6
Bile-pigment and mucus (of which, mucus about 1·4)	29·8
Salts	7·7

The yellow pigment is now designated *bilirubin* ($C_{16}H_{18}N_2O_3$). On standing, it becomes greenish from oxidation, and is converted into *biliverdin* ($C_{16}H_{20}N_2O_5$), which accounts for the dark colour usually presented by the bile in the gall-bladder after death and in the fæces. Biliverdin is also the principal colouring matter of the bile of the herbivora. Bilirubin is now known to be formed from blood-pigment or hæmoglobin by the hepatic cells, in the passage of the blood through the liver. That this was the source of the bile-pigment was suggested at the end of last century by a distinguished Fellow of this College, Dr. W. Saunders, who observed: "Green and bitter bile, being in common to all animals with red blood, and found only in such, makes it probable that there is some relative connexion between this fluid and the colouring matter of the blood, by the red particles contributing more especially to its formation."* This view, revived in our own day by Virchow, is supported by the apparent identity of bile-pigment with the pigment-hæmatoidin found in old extravasations of blood, and by the fact that what appears to be bile-pigment can be produced from blood-pigment by the action of chemical reagents;† by the discovery of Zenker and Frerichs of crystals of hæmotoidin in inspissated bile and in the bile of jaundiced urine;‡ by the observation of Gubler that bilirubin and hæmatin give the same play of colours with nitric acid, except that the green colour is most persistent in the former, and the violet in the latter;§ by the discovery by Frerichs, Kuhne, and others, that when any substance, such as bile-acids or even water, which has the property of dissolving blood-corpuscles and liberating hæmoglobin, is injected into the veins, bile-pigment (bilirubin) appear in the urine; and by the statement of Gréhaut, that there is a positive destruction of hæmoglobin in the passage of blood through the liver.‖ There are, on the other hand, grounds for believing that bile-pigment is in its turn converted into urinary pigment.¶ A substance presenting spectroscopic characters similar to those of urinary pigment can be prepared by deoxidation from bilirubin; and it is believed that, in the organism, bile-pigments are reduced by hydrogen or other reducing agents present in the intestines.* It is also a well-known clinical fact, that nothing influences so much the characters of the urinary pigment as functional or structural disease of the liver. The liver, then, together with that osmotic circulation constantly going on between it, the blood, and the contents of the intestines, to be referred to presently, appears to be the medium of conversion of blood-pigment into bile-pigment, and of bile-pigment into urinary pigment.

The bile-acids in human bile are two—glycocholic acid ($C_{26}H_{43}NO_6$) and taurocholic acid ($C_{26}H_{45}NO_7S$). Both acids are derivatives of albumen, and contain nitrogen; and taurocholic acid, to which the bitter taste of bile is due, contains all the sulphur of the bile. Both are in bile combined with soda, and both are what are called conjugate acids; that is to say, that they are composed of cholic acid ($C_{24}H_{40}O_5$), which contains neither nitrogen nor sulphur, in combination with taurin ($C_2H_7NO_3S$), which contains both nitrogen and sulphur, and glycocin ($C_2H_5NO_2$), which contains nitrogen, but no sulphur.

Cholesterin ($C_{26}H_{44}O$) is a fatty substance, which crystallises in colourless rhombic plates, one corner of which is often indented. It is met with in nerve-matter, in the spleen, in blood, and in certain morbid exudations, as well as in bile. An American physician, Dr. Austin Flint, jun., has endeavoured to show that cholesterin is formed for the most part, if not entirely, from nerve-tissue, from which it is taken up by the blood; and that one of the chief functions of the liver is to eliminate this cholesterin, the accumulation of which in the blood, from the liver ceasing to act, is attended by cerebral and other symptoms of blood-poisoning.†

Bile thus constituted is being constantly secreted by the liver. There is still much difference of opinion as to the part played by the liver in the formation of bile. It is generally admitted that the biliary acids are formed in and by the liver; but many physiologists and physicians still maintain that the bile-pigment is preformed in the blood, and is merely separated from the blood by the liver; and they explain those cases of jaundice in which there is no obstruction of the bile-duct by saying that bile-pigment accumulates in the blood from the liver ceasing to act, or from its function being suppressed.‡ But it has long appeared to me that there are weighty objections to this view.

1. Although bile-pigment appears to be derived from the colouring matter of the blood, it has not yet been satisfactorily shown that bile-pigment, as such, exists ready formed in the blood of persons who have not jaundice. Frerichs denies that it ever has. Lehmann, who has investigated with great care the changes which the blood undergoes in passing through the liver, has never been able to detect the colouring matter of bile in portal blood, and infers that this, as well as the bile-acids, must be formed in the liver itself.§ The blood of the hepatic artery has been examined with a like result. It is obvious that, if bile-pigment exist in healthy blood at all, its quantity must be very minute; and, when we consider that the quantity of bile secreted by the human liver daily is about two pints, and yet that jaundice is not a normal condition, it seems impossible that all the bile-pigment secreted by the liver can be formed in the blood; and it is not probable that part is formed in the blood and part in the liver.

2. The discovery by a few observers of a small quantity of bile-pigment in what appeared normal blood does not prove that it was formed in the blood. It is quite conceivable that it may have been formed in the liver, and been subsequently absorbed.

3. It often happens that, from various diseases, such as fatty and waxy degeneration, cancer, and cirrhosis, the secreting tissue of the liver is for the most part or entirely destroyed, bile is no longer secreted, and yet no jaundice results. Several cases of this sort are referred to by Haspel, where the gall-bladder and bile-ducts, after death, contained

* Treatise on Structure and Diseases of the Liver, third edition, 1803, 147.

† Virchow's Cellular Pathology, English Translation, p. 144; Kuhne, Lehrbuch der Physiol. Chemie. Leipzig, 1866, p. 89.

‡ Jahresb. von der Gesellschaft für Natur- und Heil-kunde in Dresden, 1858, p. 53.

§ Gaz. Méd. de Paris, 1850, p. 490.

‖ Sanderson, op. cit., p. 489.

¶ Bence Jones, referred to by G. Budd, op. cit., p. 34; Parker, On the Urine, 1860, p. 30.

* Sanderson, op. cit., p. 490.

† Recherches Expér. sur une nouvelle fonction du Foie. Paris, 1868.

‡ Budd, op. cit.; and G. Harley, Jaundice, its Pathology and Treatment. London, 1863.

§ Physiological Chemistry, Dr. Day's Translation, vol. ii., p. 87.

only a little white mucus.* Frerichs records a case of fatty liver, where the contents of the bowels were pale, the gall-bladder empty, and the biliary ducts coated with a greyish mucus, notwithstanding which the skin was of a chalky paleness, and the urine contained no bile-pigment.† Similar observations have been made by Budd in cases of waxy disease and cancer of the liver,‡ and several instances of a like nature have come under my own notice. If bile-pigment be formed in the circulating blood, it is difficult to account for what becomes of it in these cases.

4. If the constituents of bile are formed in the blood, intense jaundice ought at once to follow the extirpation of the liver in any of the lower animals, in like manner as urea accumulates in the blood after removal of the kidneys. But, so far from this being the case, Müller, Kunde, Lehmann, and Moleschott have repeatedly extirpated the liver of frogs, and have invariably failed to find a trace of the biliary acids, or of the colouring matter of the bile, in the blood, the urine, or the muscular tissue.§

The supposition that bile-pigment is formed in the blood appears to me for these reasons to be untenable.

Clinical Lectures ON BLOODLESS OPERATING,

AND BLOODLESS OPERATIONS AS ILLUSTRATED BY THE USE OF THE GALVANIC CAUTERY.

Delivered in Guy's Hospital,

BY THOMAS BRYANT, F.R.C.S.,

SURGEON TO THE HOSPITAL.

LECTURE II.—PART I.

GENTLEMEN,—In my last lecture I discussed with you the subject of bloodless operations, and explained the advantages and disadvantages of the different methods employed. I pointed out how operations performed by what is now known as Esmarch's method ought more properly to be described as examples of bloodless operating rather than of bloodless operations, on account of the general oozing of blood that, as a rule, takes place from the surface of the tissues after the removal of the band; and I then passed on to show how the true bloodless operations are those performed by the galvanic cautery or écraseur. I attempted to prove the correctness of this opinion by detailing the particulars of some operations upon the tongue; and I trust I brought forward sufficient material to carry you with me when I expressed my conviction that for the removal of a tongue, wholly or in part, the galvanic écraseur is the best instrument to employ, and that it is far superior in every point to the knife or scissors.

On the present occasion I propose to follow up the subject and to illustrate the value of the galvanic écraseur in other cases, beginning with those upon the penis.

ON AMPUTATION OF THE PENIS.

This operation is generally demanded for cancer of the organ, and, when performed at an early period of the disease, it is a very good one; when put off to a late period of the affection, it has also great advantages, for it removes what is a sad source of discomfort and distress, and in no way endangers life. When performed with the galvanic écraseur, the operation is simple and bloodless, and, as the cases to be quoted will testify, gives rise to very little pain. In Case 2 the pain of the operation itself was described as being really slight after the first contact of the heated wire; and after the operation in that case, as in all others, the local pain was trifling compared to that which had been caused by the disease. When chloroform is employed, the pain of the operation is, of course, an unimportant point; but in aged subjects the pain is not enough to call for its use.

CASE 1. *Cancer of the penis; amputation by means of the galvanic cautery; recovery; no return after two years.* (Reported by Mr. Rogers.)—Isaac T——, aged seventy, a healthy man, was admitted on Nov. 5th, 1871, into Guy's Hospital, under Mr. Bryant's care, with cancer of the penis.

He first observed something wrong with his penis three months before admission, the escape of blood from beneath the long prepuce being the first symptom. He went to a medical man, who drew back the prepuce and found a sore, to which he applied caustic daily for a month. The sore became worse, however, and he went to Mr. Cock, who sent him to Guy's.

On admission the glans penis was clearly the seat of cancerous infiltration, with about one inch of the body of the penis. Nothing but its removal could be entertained.

On Nov. 15th the operation was performed with the patient under chloroform, the penis being removed by means of the wire écraseur of the galvanic cautery. The operation was nearly bloodless. A rapid recovery ensued, the patient leaving the hospital on Dec. 10th, twenty-five days after the operation, well.

In 1873, two years after the operation, this patient was still well.

CASE 2. *Cancer of penis; amputation of penis by galvanic écraseur; recovery; no return of disease for two years and a quarter.*—On Feb. 9th, 1869, Dr. King, of Camberwell, brought to me a patient, aged seventy-three, with a cancer of his penis. It had been coming for four months, and involved the glans penis and prepuce. There was no glandular enlargement.

On Feb. 11th I removed the organ, using the galvanic écraseur, and not a drop of blood was lost. Within a quarter of an hour after the operation the patient had lost all pain, and during the period of repair he was in very little suffering. A rapid recovery followed.

He remained well for two years and a quarter, when the glands in the groin began to enlarge and ulcerate. The disease gradually increased, and destroyed life by October, 1871—that is, two years and eight months after the removal of the penis.

The stump of the penis remained perfectly healthy to the end, with a good urethra.

CASE 3. *Cancer of penis; amputation by the écraseur of galvanic cautery; recovery.* (Reported by Mr. F. C. Turner.)—James B——, aged fifty-one, was admitted into Guy's Hospital under Mr. Bryant's care, on April 26th, 1869, with cancer of the penis, which came on directly after an injury received from the handle of a crane five months before. He had always been the subject of phimosis. One month after the accident the glans penis appeared through an ulcerating opening in the prepuce.

On admission, the prepuce was swollen and perforated with an ulcer, through which the glans penis protruded. The glans and some two inches of the organ was ulcerated, and very hard from cancerous infiltration. The inguinal glands were slightly enlarged. Micturition was attended with difficulty.

April 30th.—Under chloroform the penis was amputated with the écraseur wire of the galvanic cautery, and a catheter passed and left in.

The wound healed kindly, and in a month the man left convalescent.

Remarks.—These cases of amputation of the penis are quite enough to illustrate what I want—namely, the bloodless character and simplicity of the operation when undertaken with the galvanic écraseur. The surgeon, in performing it, is only called upon to be careful to apply the wire well above the disease, and to be slow in the screwing up of the écraseur, having previously satisfied himself that the battery is in working order, and that the wire employed is of a dull-red heat. On the completion of the operation a catheter should be passed and left in, and as the wound heals a short bougie should be introduced into the orifice of the urethra, to prevent its subsequent contraction. With attention to these points there is rarely any subsequent source of trouble to be looked for. In all the cases of amputation of the penis for cancer that I have performed

* Maladies d'Algérie, vol. i., p. 262.
† Op. cit., English Edition, vol. i., p. 83.
‡ Op. cit., p. 329, 411.
§ Carpenter's Human Physiology, 7th edition, p. 434.

or seen performed, much comfort has followed the operation, and with the galvanic écraseur the operation is so satisfactory that I recommend the removal of the organ when extensively diseased, even when enlargement of the inguinal glands exists, on account of the comfort the operation affords.

ON THE REMOVAL OF FIBRO-CELLULAR TUMOURS OF THE GENITALS.

I will now pass on to show the value of the galvanic écraseur for the removal of tumours of the female genital organs, more particularly the fibro-cellular, and you will see that in these cases, as in those I have already recorded, how bloodless and simple the operation is. Indeed, from looking at these cases, I wish I had a larger example of the affection to deal with—I mean such an example as may be met with in the East, of elephas involving the labia or scrotum; for I feel fairly convinced that with the cautery écraseur, carefully employed, even the largest tumours might be taken away in a bloodless and therefore a safe way. Possibly more than one battery might be required for the purpose, or more than two connecting wires; but as those requirements could always be satisfied I can see no limit to their application. I wish my professional brethren who have the cases would test the practice.

CASE 4. *Fibro-cellular tumours of labia; removal by galvanic cautery; recovery.* (Reported by Mr. F. C. Turner.)—Ann C——, aged sixty, was admitted into Guy's Hospital, under Mr. Bryant, on May 5th, 1869, with two large tumours, the size of small cocoa-nuts, occupying the position of the labia majora. They had been growing for about one year, and, besides the mechanical inconvenience of their pressure, they had inflamed and discharged.

On July 9th Mr. Bryant removed the tumours with the galvanic cautery écraseur, having previously marked out the line of division by pins inserted through the bases of the growths. The platinum wire was looped round the pins before it was screwed up and heated. The two masses weighed eleven ounces. In twelve days the burnt eschars sloughed off, and by July 28th the parts had healed. Not a drop of blood was lost during the operation, and but little pain was felt subsequently.

CASE 5. *Fibro-cellular tumour of the labium; removal by cautery; recovery.* (Reported by Mr. C. S. Ticehurst.)—Fanny E——, aged thirty-two, was admitted into Guy's Hospital on Dec. 7th, 1869, under Mr. Bryant's care. She was a married woman, and had had one child. Twelve months previously she first felt a sharp pain in the left labium. This came and went for six months, when she discovered a tumour in the part the size of a walnut, hard and painful on pressure; it has steadily increased since.

On admission the left labium presented a pendulous tumour the size of a large pear. It was ulcerated upon the tip, from which an offensive discharge took place.

On Dec. 8th Mr. Bryant removed the tumour, using the écraseur of the galvanic cautery. The operation was performed with the patient under chloroform, and the base of the tumour was previously transfixed with pins such as were used in acupressure. The operation was almost bloodless. In five days the eschar formed at the line of section came away, and the parts rapidly healed.

CASE 6. *Fibro-cellular tumours of the labia; removal by wire of galvanic cautery; cure.* — In April, 1872, I saw, with Mr. Jackson of Highbury, a Mrs. H——, aged sixty-six, with two large fibro-cellular warty tumours of the labia. They had been coming for years, and were ulcerated. I removed them both by a bloodless operation on April 18th, by means of the wire of the galvanic cautery. I isolated the masses—each being the size of a fist—by pins passed beneath their bases, before encircling them with the wire; and a steady recovery followed.

REMOVAL OF OTHER TUMOURS AND CANCERS WITH THE ECRASEUR.

After the cases I have read to you, you will be well prepared to understand how the galvanic écraseur may be employed for the removal of other tumours, and some of these I will now quote. In the following case its value was well seen; indeed, without its aid, I question whether any operation would have been performed, or, if undertaken, could have been successful. I have had a second case exactly like the one I am about to record, but cannot find any notes of it; in it, however, the disease was of the same kind—cancer; it was situated in the same part, and was removed with the same facility and success.

CASE 7. *Epithelial cancer of the perineum, involving the recto-vaginal septum; removal by the galvanic écraseur; recovery.* (Reported by Mr. Manby.)—Eliza L——, aged fifty-nine, was admitted into Guy's Hospital, under Mr. Bryant's care, for a large cancerous, ulcerating growth, occupying the perineum and the recto-vaginal septum. It had been steadily increasing for two years, and was now the size of a crown-piece.

On the 13th of November, 1868, Mr. Bryant removed it by means of the galvanic écraseur, and the operation was a bloodless one. The patient was placed in the position as for lithotomy. The cancerous mass was drawn well forwards, and its base isolated by the cautious introduction of pins. The wire of the écraseur was then passed round these pins, and carefully screwed home. A junction was then made with the galvanic battery, and the parts slowly and deliberately divided. The tumour fell off into the operator's hand without the loss of a drop of blood, the surface of the wound presenting a dry, grey eschar. But very little pain followed the operation. On the eighth day, when the slough came away, some slight bleeding took place, which was easily arrested by cold; and in one month the patient left, well.

In the following cases the value of the galvanic écraseur is well illustrated. In Case 9, in which the hæmorrhagic tendency existed, its use was well seen. The cases speak for themselves; they need no comment.

CASE 8. *Epithelioma of the lower lip; removal by cautery; recovery.* (Reported by Mr. Manby.)—William W——, aged forty-seven, came under Mr. Bryant's care in April, 1869, with a cancer of the lower lip. It was a superficial one, the size of a sixpence, and had been growing for some months. On April 16th Mr. Bryant isolated the growth by passing two fine pins beneath its base; round these he then passed the platinum wire of the galvanic écraseur and screwed it home. The junction was then formed with the battery, and the growth removed. The operation was bloodless, and a rapid recovery followed.

The patient stated that the sensation during the operation was that of being cut.

CASE 9. *Epithelioma of lip; removal by knife; bleeding; return of disease; removal by cautery; recovery; no return two years and a half subsequently.*—On Jan. 12th, 1870, I was consulted by a naval officer, aged fifty-five, with a cancer of his lower lip. It had been growing for six months, and was about the size of half a nut. I removed it by excision, but the operation was followed by obstinate bleeding, this patient having, as I found out, the hæmorrhagic diathesis. The patient, however, recovered, and remained well for eighteen months, when a return on the spot took place. The disease grew, and was removed by me with the wire of the galvanic cautery on August 18th, 1871, as in the last case. The operation was a bloodless one, and a rapid recovery took place. The gentleman is now, nearly two years and a half after the operation, quite well.

CASE 10. *Pedunculated fibrous growth of the tongue; removal by cautery; cure.*—On April 22nd, 1868, a female child, aged five years, was brought to me with a pedunculated fibrous growth, half an inch in diameter, attached to the dorsum of the tongue. It had only been seen for about three years, and was mechanically in the way. I divided its peduncle with facility by means of the wire of the galvanic cautery, and removed the growth in a bloodless way. A good recovery ensued.

CASE 11. *Sweeps' cancer of the dorsum of the hand destroyed by the galvanic cautery; recovery.* (Reported by Mr. G. Bettany.)—Godfrey B——, aged forty-seven, a sweep, was admitted into Guy's Hospital on Jan. 17th, 1870, with a large cancerous sore on the dorsum of the left hand. It had been coming for eight years. Having appeared as a pimple on the spot, it grew very gradually for a year and a half, when it began to grow more rapidly, and for one year the surface has been ulcerated. On admission a cancerous sore an inch and a half in diameter existed on the skin over the metacarpal bone of the left index finger and thumb; it had raised, irregular, warty margins; no glandular enlargement.

On Dec. 31st, with the patient under the influence of chloroform, Mr. Bryant completely destroyed the whole

surface and thickness of the cancerous growth by means of the galvanic cautery; not a drop of blood was lost, and no pain followed the operation. When the eschar came off, a healthy granulating surface was left, which completely cicatrised. He left the hospital a week after the operation, but called two weeks later to show that his hand was well.

Clinical Lecture ON FEVER.

Delivered at St. Thomas's Hospital,

BY THOMAS B. PEACOCK, M.D., F.R.C.P.,
SENIOR PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—During the last few weeks several cases of fever have been under my care in this hospital upon which I propose to offer some remarks. Of these cases, three were cases of typhus and five of typhoid. Two of the cases of typhoid occurred in a mother and child. The mother was twenty-nine years of age, and was admitted into the hospital on the 28th of October, being then stated to have been ill for two weeks, but out of health some time longer. She had symptoms of low fever, a high temperature (103·6°), and much bronchitis; and was greatly prostrated. There were a few small, round, livid, non-fading spots about the upper part of the thorax and the lower part of the neck. The spots had disappeared on the 4th of November, or on the seventh day after her admission; but the feverish symptoms did not readily subside. The temperature continued high, and the prostration was so persistent that she was not able to leave her bed before Christmas-day, or the fifty-eighth day from her admission into the hospital; and she was not presented before the 4th February, or the ninety-ninth day from admission. The case was very obscure; but it was thought most probable that it was a case of typhus, which had passed its acme before it was admitted; but if so, the commencement of convalescence was imperfectly marked, and the duration of the attack was very much prolonged. The protracted convalescence might, however, it was thought, be due to the severe bronchitis with which the attack was complicated, and to the patient having been for some time before the occurrence of the severe illness very much out of health. At the end of November, however, we heard, what had been before denied, that there were other members of the family ill at home; and Mr. Donkin, the house-physician, went down to Greenwich, where the patient resided, and found one child convalescent from some form of fever; and another, eight years of age, seriously ill. This child was removed to the hospital on the 28th of November, the report then being that it had been ailing for about a month, but seriously ill for two weeks. The child had symptoms of active fever, a temperature of 104°, and severe bronchitis. There was a copious eruption on the trunk, very similar in appearance to that which had been observed on the mother. The child became much prostrated, and made a very gradual and slow recovery. She was not able to leave her bed before the 6th of January, or the thirty-ninth day from the period of admission; and was only presented on the 4th of February, or the sixty-eighth day from her admission into the hospital. There could be no doubt that the child's case was one of typhus, and that confirmed the correctness of the diagnosis in the case of the mother.

In the third case of typhus the patient was a boy, thirteen years of age, admitted on Jan. 1st. At that time he was stated to have been ill eleven days. There was a copious eruption of livid spots on the skin and symptoms of high fever, the temperature being 104·6°. The spots disappeared in two or three days, and on Jan. 8th the temperature fell to 98·6°, and from this time he made a rapid recovery, being able to leave his bed on the 13th. He was discharged on the 27th, or the thirty-eighth day from the stated period of the commencement of the symptoms. In this case the nature of the disease was quite clear, and the case followed the course which it generally does in children. The diagnosis was further confirmed by the admission a few days after of a brother of the same patient, also presenting symptoms of typhus.

The cases of typhoid to which I refer were five in number. Of these, the first was that of a boy, aged twelve, admitted on the 4th of October, having been then ill for two weeks, but out of health for two or three months before. He had diarrhœa before he was admitted, but was not so seriously ill as to be confined to bed. On the day of admission he had a high temperature, 103·7°, and was considerably prostrated; the diarrhœa continued, and the evacuations were passed in bed. The symptoms of fever were severe and protracted, the diarrhœa very persistent. He was constantly delirious, and subsequently became very torpid and difficult to arouse. There were never any spots upon the skin. The attack was very prolonged, so that the convalescence was not established before the 16th of December, or the seventy-third day from admission, and he was not discharged before the 8th of January, or the ninety-sixth day from admission. During a large portion of his convalescence he was excessively fractious and difficult to manage.

The second case occurred in a female, twenty-one years of age, who was received into the hospital on the 8th of October, having been then ill for four days. In this case, though the fever was severe, the temperature rising to 105°, the chief symptom was prostration of strength, there being neither spots on the skin nor diarrhœa, and not very marked cerebral disturbance. There could, however, be no doubt that there was considerable intestinal disease; for even when convalescence was apparently fully established, a very small dose of castor oil, given after there had been no evacuation from the bowels for several days, was followed by frequent loose evacuations and a sharp recurrence of fever, which, however, subsided in two or three days. She was convalescent on the 28th of October, or the twentieth day from admission, and the twenty-fourth from the reported time of seizure; and she was discharged on the 19th of November, or the forty-second day from admission.

The third case of typhoid occurred in a probationer nurse at the hospital, twenty-five years of age. She had been in attendance on two cases of typhoid, in both of which there was diarrhœa, and in one the evacuations were passed in bed. Her attendance on these cases commenced about three weeks before her admission into the ward, and ceased about a week before; after which time she was employed in watching a surgical case in which there was a profuse and offensive discharge. About the same time she became poorly, and after four days she was so ill, suffering from diarrhœa and feverish symptoms, as to be incapable of attending to her duties. On the 14th October, or the fourth day of serious illness, she was admitted into the ward. During the remainder of the attack she had no diarrhœa; indeed, evacuations were only procured by the employment of medicine. There were, however, spots coming out at the time she first came under care, and they continued to appear for ten days. Her temperature was high (103·8°), and she was much prostrated. She became convalescent on the 11th November, or the twenty-eighth day from her admission into the ward and the thirty-first from the commencement of serious illness; and she was discharged on the 11th December, or the fifty-eighth day from admission.

The fourth case was admitted during protracted convalescence. The patient was a girl aged fourteen, who was admitted on the 12th December, and was stated to have suffered from symptoms of typhoid for four months, without ever having become satisfactorily convalescent. She was excessively fractious and impracticable; had a very dry, harsh skin, a high temperature (103·2°), and hectic symptoms. The bowels were confined. Under the use of baths and the inunction of oil, the skin became moist and the symptoms subsided; and she was convalescent on Jan. 6th, or the twenty-fifth day from admission, and was discharged on the 23rd of the same month.

The fifth and last case was a very obscure one. The subject of the disease was a young man aged sixteen, employed as a clerk, but who had recently been leading a somewhat dissipated life. He was admitted on the 22nd of December, and was then stated to have been ill for four days. He had symptoms of active fever, and was delirious, and two days after admission became so violent as to require re-

straint. In two or three days he was quieter, but not entirely free from delirium. Before his admission he had not had any diarrhœa, but four days after the bowels became much relaxed, and he passed the evacuations in bed. The abdomen also became excessively tender and tumid, and the temperature rose to 103·6°. The breathing was rapid, and he died exhausted on the 8th January, or the seventeenth day from the time of admission, and the twenty-first day from the reported period of the commencement of illness. There were not any spots at any time on the skin. On examination after death there was found general peritonitis, and a perforation of the ileum had occurred at a point between two and three feet above the cæcum. The mucous membrane was free from disease everywhere except at the seat of perforation and immediately above the ileo-cæcal valve. At the latter point two of the plates of Peyer were very distinct, and the mucous membrane above and around them was slightly reddened and somewhat abraded. As I have before said, the nature of this case was not obvious, but it seems most probable that it is to be regarded as one of typhoid. Except some little pneumonic exudation, there were no morbid conditions found in the body, except those in connexion with the alimentary canal; and though the intestinal disease was, except at the point of perforation, very slight, it is well known that in typhoid there is often no correspondence in intensity between the amount of mischief in the bowel and the degree of constitutional disturbance. Occasionally also perforation occurs in cases in which there is very little intestinal disease. Indeed, Chomel has recorded in his "Clinique Médicale" a case which is almost the counterpart of this.

The first remark which I have to make in reference to these cases is as to the diagnosis—that it is impossible to distinguish between typhus and typhoid from one or two symptoms, however important such symptoms may be, but that to ascertain the nature of each case we must take into consideration the whole history of the disease, its mode of origin, its course, the symptoms by which it is characterised, and the mode in which the febrile symptoms subside. A case of typhus usually commences suddenly and rapidly progresses, so that the patient is admitted into hospital at an early period, generally before the seventh or eighth day; and usually also the case undergoes a marked amendment, if there be not any serious local complication, about the fourteenth day. Yet it will be observed that in two of the three cases to which I have referred the time of commencement of the symptoms could not be distinctly ascertained, but the patient had certainly been ill for an unusually long time when admitted. Indeed, in both the eruption had certainly been on the skin for several days when the patient was first seen, and was clearly passing away in the first case. In both of them the period of convalescence was very imperfectly marked, the amendment was very gradual, and the whole attack unusually prolonged. In the third case, though the time of seizure was more clearly ascertained, the period of admission was also unusually late, but the case followed the usual course, and the time of commencement of convalescence was well marked, and the progress to recovery was rapid. It is not uncommon to hear a case pronounced to be typhus because it is characterised by marked symptoms of cerebral disturbance and absence of abdominal disorder, or to be typhoid because the abdominal symptoms are predominant and there is comparatively little cerebral disorder. But nothing can be less to be depended upon than these symptoms as indicating the several forms of disease, and it not very unfrequently happens that cases confirmatory of this remark are in the hospital at the same time. This was the case some time ago. In one case a middle-aged female was admitted, after a few days' illness, with symptoms of fever, much prostration of strength, and profuse diarrhœa, but there was not any marked cerebral disorder, and she passed favourably through the attack, the diarrhœa ceased, and in about twenty-one days she was convalescent. Judging from the presence of diarrhœa and the absence of marked cerebral disorder, the case might have been supposed to be one of typhoid, but it was really, as indicated by the general symptoms and the eruption on the skin, one of typhus. In the other case a young man was admitted after an obscure indisposition of three weeks' duration, with symptoms of cerebral disturbance, but without diarrhœa or other evidences of abdominal disorder. This case might therefore have readily been mistaken for one of typhus, though in reality typhoid, the diagnosis being established by the appearance of the usual rose rash. Severe cerebral symptoms indeed very frequently occur in the early stage of typhoid, while diarrhœa is occasionally absent. The latter was the case in two out of the five cases referred to, though in one of them the bowels had been relaxed before the patient came under notice, and in the other the tendency to intestinal disorder was indicated by the undue action of a small dose of mild aperient, even when convalescence appeared well established. The eruptions on the skin, differing as they do in the two forms of fever in the periods at which they make their appearance, the forms which they assume, and the course which they follow, were they of invariable occurrence, would afford a ready and conclusive means of establishing the diagnosis. But though the eruption probably occurs at some period of the attack in all cases of decided typhus, the spots in typhoid are very uncertain, being often absent in cases of otherwise well-marked typhoid. I find that in only thirty-seven out of forty-four fully reported cases of typhoid which have recently occurred, were there any spots on the skin; and it will be recollected that they were absent in two of the cases of which I have spoken—one of them being the most severe of the five cases, and the other a decided though not very severe case.

I have a few remarks to make in reference to the treatment of cases of fever. We are all agreed as to the importance of carefully regulating the diet of a patient in the active stages of the disease, and of rigidly enforcing his being kept in bed; but I doubt whether, in typhoid more especially, the importance of continuing the same precautions sufficiently long during convalescence is generally realised. The frequency with which relapses occur in typhoid is a peculiar feature of the disease, and probably they cannot be entirely prevented; but I believe they generally result from the patient being allowed to indulge his appetite too freely, or to leave the bed too soon; and I think that the very small proportion of relapses that have recently occurred in my cases—only two in sixty-five—has been mainly due to the unceasing care which I have taken to prevent either of these mistakes being committed. Probably the cessation of the symptoms of active fever indicates the period at which the mischief in the alimentary canal ceases to progress, but after this the ulcers take a long time to heal. I have known a patient die on the eightieth day, and the ulcers to be still not entirely healed. During the time that there are any remains of ulceration it is most important that the bowel should be kept as quiet as possible, and the patient be persistently fed on the lightest and most easily assimilable food, so that no accumulation may take place. For the same reason the food should be given only in small quantities, and at regular intervals. These rules I steadily enforce, however long may be the duration of the attack, while the tongue still continues furred, and there is any diarrhœa, or tenderness or inflation of the abdomen; and I confine the patient to bed, or at least to the recumbent position, till he has recovered considerable strength. I have known a patient die of perforation when he had apparently so completely recovered as to be allowed to leave the hospital, the untoward event having been caused by his indulging too freely in food, perhaps not of a digestible character. It is also of great importance to avoid exposure to cold during convalescence; for patients in the weakly state, which after severe typhoid is so very persistent, are very susceptible to cold, and readily suffer from bronchitis or pneumonia. All excitement of mind should also be avoided. I have known a patient, from neglect of proper care in this respect, suffer from acute and fatal cerebral inflammation when he seemed to have almost completely recovered.

There is some difference of opinion among practical men as to whether it is better at once to restrain the diarrhœa in typhoid, or to leave it alone unless very severe. In the early stages of typhoid there is usually diarrhœa. As the case progresses the stools generally become less frequent and more consistent; and towards the end of the attack the bowels are usually confined, and sometimes very obstinately so. This would appear to indicate that the right line of practice is to leave the case alone, unless the diarrhœa be so severe as to imperil the safety of the patient, in which case it should, if possible, be checked. I, however, while

refraining from giving astringents in cases of ordinary typhoid, regard the frequency of the evacuations as in part indicating the amount of stimulus and support which should be given to the patient, and I believe that this rule will generally be found to answer.

When in cases of typhoid the bowels become confined, much caution is required in the exhibition of aperients; enemata are always safe, and generally will procure sufficient relief; but sometimes, and especially when the patient is taking a fair amount of food, more free evacuation may seem to be required; and yet the mildest aperients may bring back the diarrhœa and cause a relapse. The rule which I generally follow is not to interfere so long as the patient is apparently not suffering from the bowels not being acted upon, and this even though several days should elapse; but if the patient complains much of sense of fulness, or experiences uneasiness or pain, and especially if the abdomen becomes tumid and tender, the bowels must be relieved. Under these circumstances I generally order a dose of calomel and opium, one or two grains of the former to one of the latter, and follow this by a small dose of castor oil and by an enema if necessary, and the effect of one or two doses of this kind is almost always to procure full and satisfactory evacuation, after which the symptoms generally entirely subside. You will recollect that in the case of the nurse the bowels were not acted upon for six days, at the end of which time threatening symptoms appeared, but entirely subsided under the course of treatment which I have mentioned. Similar symptoms also occasionally occur during even advanced convalescence from too much food, or food of an improper kind being taken, and they are best treated in the way I have stated.

The last remark which I have to make is in reference to the employment of stimulants in the treatment of fevers. Some years ago, under the influence of teaching which I cannot but regard as mistaken, stimulants were so largely given in fever and other forms of active disease as to constitute almost the whole treatment, and make it often difficult to decide, when patients were seen, how much of their condition was due to the disease under which they laboured, and how much to the treatment employed. Now, however, a more judicious system is followed, and stimulants are less constantly and freely given. But there seems danger that, in the reaction, the discontinuance of the use of stimulants should be carried too far. Believing, as I do, that the abuse of fermented beverages is the greatest social bane in this country, I should have been glad could I conscientiously have done so, to have recommended the entire abandonment of the use of stimulants in the treatment of fever and other forms of disease. To do so would, however, I believe, be to deprive ourselves of one of the greatest means of alleviation which we possess, though one which requires great care in its use. It would be very much more satisfactory if the employment of these and other remedies could be reduced to some definite and scientific rules; and endeavours have been made by the careful analysis of the results of different methods of treatment to deduce such general rules. But the cases which we have to treat are so variable in their character that it is impossible so to classify them as to be sure that the cases compared are really similar, and that the results obtained are to be depended upon as exact. I fear, therefore, that we must be content still to leave to the judicious physician the choice of the means of treatment to be pursued in any given case, guided by his knowledge of the disease he has to treat, and his experience of the results of the means employed in other similar cases. So far as the use of stimulants is concerned in the treatment of fever, it is impossible to lay down any general rules; but I believe them to be eminently beneficial when given when the active stage of disease is subsiding, and the patient's power is beginning to give way, with the view of upholding the strength while the disease is in process of cure. If the patient is much prostrated, and the pulse weak, intermittent, or irregular, or abnormally slow, they may confidently be given; and if under their use the patient becomes less restless, the pulse improves in character, and the prostration diminishes, they may safely be persevered with. The amount of stimulus which is required must also be left to the discretion of the practitioner; but generally it is more advantageous if exhibited in small doses, repeated when the effect begins to subside. If a given dose exhibited at certain stated intervals seems to excite the patient, it does not follow that no stimulant is required; it may rather be that the dose is too large and the repetition too frequent. When the patient's strength becomes greatly exhausted, as it often does when the crisis of the disease is passing or passed, the very liberal exhibition of stimulants may be necessary; and as the weakness becomes less and more food is taken, the quantity may be gradually lessened; but I think it is a great mistake to suppose that because the patient can be got to take a large quantity of food, the use of stimulant is unnecessary. Food, as I have before said, may easily be given too freely. The best results ensue from the judicious combination of moderate amounts of food and stimulus, and this is especially the case at the period of early convalescence. In estimating also the desirableness of administering stimulants in any given case, the question to be asked is not simply whether the patient will recover without their use, but whether he will make an equally good and rapid recovery without them? Typhus and typhoid are diseases of very variable severity, and this is especially the case with typhoid, and there are some cases of both forms which will do very well without any stimulant at all. But, on the other hand, I have not unfrequently seen, in cases of fever which have never been very severe, that the patient will go on from day to day without making any material progress so long as stimulants are withheld, while on the exhibition of a small amount of wine or spirit there has been a marked and quite unmistakable improvement in the condition of the patient, and the case has afterwards steadily progressed to recovery. What I would wish to impress upon you is, not that you should make up your minds to give or not to give stimulants in cases of fever, but that you should hold yourselves free to have recourse to them, or not to use them, according to the apparent requirements of the several cases which you have to treat. There can be no worse fault in medical practice than to adopt a hard-and-fast rule as to the plans of treatment or special remedies to be employed in any form of disease. You should endeavour to make yourselves fully acquainted with the nature of the disease you have to treat and the condition of your patient, and then prescribe the course of treatment which you think will most conduce to his recovery.

ABSTRACT
OF THE
Lumleian Lectures
ON THE
INFLUENCE OF BRIGHT'S DISEASE:
(1) ON THE HEART AND ARTERIES; AND (2) ON THE PRODUCTION OF INFLAMMATION.

Delivered at the Royal College of Physicians,

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LECTURE I.

MR. PRESIDENT,—In the tables which have been presented to you I have given an account of the post-mortem examination of cases of Bright's disease met with in St. Mary's Hospital during nearly twenty years. These examinations have been made by a series of registrars; and the nomenclature adopted is that sanctioned by this College. In the arrangement of these tables I have been guided, not by the size of the kidney, but by the change in its structure. I have placed first the cases of acute Bright's disease—16 in number. The post-mortem has not always been accompanied by the history of the case, so that some few may have been arranged under the fatty kidney. In the second place I have put the fatty kidney as following the acute by insensible gradations, for it is difficult to say when the acute becomes chronic; and during this period the best observers are disinclined to say when the one passes into the other. One-fifth, or 58 out of 275 cases, were fatty. Next comes the granular kidney, which I have arranged under three heads, determined by the size of the organ:

(1) where the kidney is lessened in size—115 cases; (2) where the kidney is of natural size—15 cases; (3) where the organ is of larger size than natural—12 in number. Then I have placed the lardaceous kidney and other forms of kidney disease not classified under the term Bright's disease.

My object has been to inquire into the influence of Bright's disease upon the heart and arteries, and so have made five groups to embody these conditions:—(1) Where the heart is small; (2) where the heart is natural in size; (3) where the heart is enlarged; (4) where the heart is very large; (5) where the size of the heart is doubtful. In many cases of acute Bright's disease the heart was small: it was so in one-fourth of the cases of fatty kidney; in the granular kidney, in about 1 in 29; in the lardaceous, in one-fifth of the cases. The heart was natural in size in one-fourth of the cases of acute Bright's disease; in one-third of the cases of fatty kidney; in less than one-fifth of the contracted; and in one-half of the lardaceous kidney. The heart was larger than natural in one-third of the cases of acute Bright's disease; in one-fifth of the cases of fatty; in one-sixth of the cases of granular contracted; in one-fifth of the cases of lardaceous disease; in more than one-half of the cases of the disease of the kidney from calculus, stricture of the ureters, disease of the prostate, &c. The heart was large, the left ventricle hypertrophied, in one-third of the cases of acute Bright's disease; in one-fourth of the fatty; in one-half of the cases of granular contracted; in one-half of the cases of granular kidney of the natural size; in one-fifth of the cases of lardaceous disease.

In the 15 cases of fatty kidney, where the heart was small, 13 had suffered from emaciating disease; in the 4 cases of granular contracted kidney, with small heart, 3 had had phthisis and 1 inflammation of the lungs; so that only 2 cases out of 19, where the heart was small, had been free from disease tending to emaciation. In one-fifth of the cases of lardaceous disease, and nearly one-fourth of the disease of the kidney arising from calculus and stricture of the ureter, or disease of the prostate or bladder, the heart was small; and all of these cases, from their very nature, were subject to exhausting disease, all of them, in fact, being subject to suppurative disease. In one-third of the cases of fatty kidney the heart was of natural size, and the same in one-fifth of the cases of granular contracted; in 12 out of 17 cases of fatty kidney the patients had had diseases tending to emaciation; in 16 out of 22 cases of granular contracted kidney the patients had suffered from emaciating diseases; so that the effect of the disease was to counteract the influence tending to increase the size of the heart from the disease of the kidney. In 3 cases of lardaceous disease, where the heart was small, and in 7 others where the heart was natural in size, there were exhausting diseases, which tended to lessen the size of the heart, and none had valvular or arterial disease to compensate for the enervating disease. In 3 cases of disease of the kidney caused by stricture of the urethra or disease of the prostate or bladder, and where there was pus in the kidney, the heart was small; in 7 other cases, or one-half, the heart was of natural size, and in all of these there was stricture of the urethra, disease of the prostate or bladder, or abscess of the kidney. In all these cases both the body and the heart were subject to the influence of wasting disease.

With regard to the cases where the heart was very large, the left ventricle hypertrophied, there were one-fourth of the cases of fatty kidney, or 14 in 59. The weight of the heart was from 16 oz. to 30 oz.; the average weight 20 oz. In all but two cases there was valvular disease or atheroma. Aortic obstruction was only present in 1 case; in no case was there mitral obstruction. The effect of valvular disease and atheroma and pericarditis in producing great hypertrophy in cases of fatty kidney was felt in 18 out of 58 cases, and in 13 the heart was very large. Valvular disease was present in only 2 cases where the heart was normal, and this would point to some cause for the increase of the weight beyond valvular and aortic disease. Among the series of granular contracted kidney there were 59 out of 115 cases in which the heart was hypertrophied; the average weight 20½ oz.; between 14 oz. in a female and 38 oz. in a male. The valves were diseased in 22 cases, aortic incompetency in 8, mitral in 7, and atheroma in 15. Contracted granular kidney was accompanied with disease of aorta or coronary artery in 21 cases. The heart and artery were free from disease in about half the cases, and the average weight was nearly the same whatever the disease. We see some factor is at work that causes the hypertrophy beyond the valvular or arterial disease. In 24 out of the 59 cases the body was wasting away, whilst the heart was doubling its size, so that some great enlarging influence is at work above the disease of valves and aorta, tending to produce the thickness of the walls of the heart. We have to inquire as to what these causes are. In the other groups of granular kidney the heart was hypertrophied 8 times in 15, and 8 in 12; in 5 of each of these groups there was valve disease. The heart was hypertrophied in only a small number of the remaining cases.

Acute Bright's disease is accompanied with great hypertrophy. Here we have a virgin heart—one untouched by disease—and we are able to ascertain the time the disease comes on, and all the change produced by the débris of tissues in the circulation. In one-third of the cases of acute Bright's disease—4 in 11—the heart presented great hypertrophy. The weight of the heart was from 15 to 21 oz. In 4 cases the heart was enlarged. The increase here is due to the affection of the kidney; no lowering agency besides disease itself is at work. But not so in 4 cases where the heart was natural—two of these were dependent upon scarlet fever; in one there was pleurisy; in one pericarditis; in a third purpura, with great intestinal hæmorrhage; and in a fourth, peritonitis. Here the presence of lowering disease prevented the Bright's disease from enlarging the heart. The acute Bright's disease, however, did its work; in 4 cases the heart was very large, in 6 moderately enlarged, and in 4 of the natural size. I have had drawn up for me by my friend Dr. Greenfield, medical registrar of St. Thomas's Hospital, a table of cases of scarlatinal and acute Bright's disease. They are valuable as showing the effect of acute Bright's disease upon the heart, giving the details of the condition of the walls not given in my tables, and they agree with those occurring at St. Mary's. I will conclude by a brief inquiry into the cases of chronic Bright's disease where the heart was rather large. In 8 out of 58 cases of fatty kidney the heart was rather large, weighing from 12 to 14 oz. The disease of aorta was small; in 1 case there was emaciation, and in 4 a good condition of body. This shows that fatty kidney with exhausting disease has a tendency to enlarge the heart, though fatty disease is itself an exhausting disease, from the drain of albumen; but the two influences maintain the heart at the normal. But if valvular disease or aortic disease preponderates, the heart is enlarged and hypertrophied; but if exhausting disease, then the heart remains normal or small. In one-sixth of the cases of contracted granular kidney—19 in 115—the heart was rather large, from 11 to 14 oz.; 5 had valvular disease, and in 2 the aorta was atheromatous. This shows that granular contracted kidney tends to increase the size of the heart, and resists the influence of lowering disease to lessen. Thus we have three factors at work upon the heart, each exerting its own influence—(1) the Bright's disease; (2) wasting disease; (3) the influence of valvular and aortic disease tending to enlarge the heart. Wasting disease tends to lessen the weight of the heart and all the body; but if the first is greater the heart is enlarged, or remains natural; but if the second the heart is lessened; if the first and third combine the heart is greatly enlarged in spite of the second.

I will now pass on to the clinical side, and will first consider the effect of acute Bright's disease as to the condition of the heart and great vessels, and shall only touch on other points as far as they affect this inquiry. A patient was admitted into St. Mary's Hospital in August, 1870. Three weeks before admission he had had pain in the chest, shortness of breath, pain in loins, and dropsical swelling. The pulse one month after, when I first saw the patient in September, was full, apex beat strong in fifth interspace, half an inch to the left of the nipple line; the second sound was loud and ringing, the first feeble; the first sound reduplicated; the second sound was heard in the back; the pulsation of the aorta was felt to the right of the upper sternum by the two hands applied one over the other and pressed gently upon the chest. The urine was of a pale straw-colour, with a few blood-corpuscles. A week later the doubling of the first sound was still well marked, but the area was limited to a point below the nipple. He left the hospital three weeks after. Another case, a woman

with acute Bright's disease, her second attack, the first being one year before, had sickness, pain in the loins, and smoky urine. The pulse on the third day was not strong, and dwelt under the finger and was followed by tension; the apex beat was long, felt one inch to the left of nipple line and five inches from the lower end of sternum; the first sound was loud and prolonged at the apex; the second sound was vibrating, ending in a shock, over the great vessels; both sounds moderately loud. On the ninth day the impulse was less strong, and in the fourth interspace, just below the nipple. On the thirteenth day the second sound was loud over the ventricle, and the two sounds were equal over the great vessels; on that day the urine passed contained 600 grains of urea; the impulse was then lessened and scarcely felt over the right ventricle. On the fourteenth day at the apex the first sound was loud, the second feeble over the right ventricle; the second sound was louder than the first, and still more so over the great vessels. On the twenty-fifth day she got up well. These cases show the influence of Bright's disease upon the heart. The heart was enlarged and the left ventricle distended under the influence of acute Bright's disease; after a few days of rest the heart returned to its normal position and size.

In concluding, I just introduce a case which I shall detail in opening my next lecture. The patient is at present in University College Hospital under Dr. Wilson Fox. On Jan. 29th I received a message from Dr. Fox in a note from Mr. Gould, telling me that a case of acute Bright's disease, presenting doubling of the first sound over both ventricles, had been admitted. I saw the patient with Mr. Gould. We found a very tense radial artery, very loud metallic sound over the aorta, pulsation with the second beat over that vessel to the right of upper sternum, and doubling of the first sound heard over both ventricles and upwards and downwards to a great extent beyond and over the pulmonary artery and aorta; the doubling was more marked than in any case I have yet examined.

ON THE

LOCAL TREATMENT OF CARBUNCLE.

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IN a recent number of THE LANCET the attention of the profession has again been called to the subject of carbuncular disease, with especial reference to its peculiarities when manifesting itself on the face. As I have quite recently had under my notice and care an example of this serious form of the affection, in which I happily succeeded in cutting short its progress, and to all appearance aborted it in its early stage, I wish to record the treatment adopted, and (from the experience I have had in several instances of carbuncle located elsewhere) to express my conviction that this method offers greater advantages than perhaps any other in the management of these important disorders.

In a short communication published in THE LANCET for Dec. 11th, 1869, I recorded the particulars of a case of extensive carbuncle of the back of the neck which I had treated by the free application of carbolic acid to the diseased part, and especially by its free insertion into the holes and sinuses which had formed, as is usually the case, over the central portion very early in the course of the disease. An experience since that time of two or three cases of large carbuncle and of many cases of carbuncular boils, treated by the same method, has proved to me that the action of this remedy is so definite and so constantly beneficial that I have no hesitation in recommending it to the favourable notice of the profession.

My recent case was this:—A gentleman of seventy years of age, but still strong and hale, had suffered for some weeks from asthmatic bronchitis, from which he had in great measure recovered, when he was suddenly attacked (now some five weeks ago) with pain and hard nodular swelling of the lower lip near to its right extremity. Almost immediately a double festering pimple formed over the centre of this swelling, and the painful induration rapidly extended past the corner of the mouth to the adjacent cheek, and, to a less degree, along the substance of the lip, causing also considerable œdematous swelling of the whole of this part. On the second day severe constitutional symptoms manifested themselves, and feelings of extreme illness were complained of. During this day and the next the tumefaction and hardness continued to increase, the festers over the centre of the original spot opened and were moist with dirty pus, the whole of the lower lip and right corner of the mouth and the adjacent cheek became tense and swollen, and it was quite evident that a carbuncle was forming on the right side of the face. Into the centre of the two holes which had formed I now pressed with a probe some threads of lint soaked in a strong solution of carbolic acid in oil (one part to four), and I also laid a piece of lint wet with the same over their apertures, so as to supplement the small quantity which the shallow sinuses would contain. A little smarting was complained of, but the application was repeated after a few hours, and again the following day. Almost at the end of twenty-four hours it could be perceived that a check had taken place in the morbid process, but by the next day it was plainly evident that the inflammation and induration were really beginning to subside. The carbolised lint was still carefully and scrupulously thrust to the very bottom of the small holes, and from this time no further spread of the disease took place, but, on the contrary, there was a rapid subsidence of the œdema, and in two or three days more little remained but some diffused swelling of the lower lip, some tender induration at and around the seat of the original pimple, and the ragged discharging opening which had formed at the site of the primary festers. The disease was therefore stayed, and in a few days more the patient was convalescent. He is now quite recovered.

I should scarcely have ventured to instance this case as proving the aborting power of carbolic acid over carbuncular or furuncular inflammation—seeing that the disease never attained to very formidable dimensions, and that possibly it might not under any circumstances have increased to a very serious size or extent,—had I not witnessed precisely the same effects in other cases as were here produced by the application of the acid. My conviction, nevertheless, is that the carbuncle was not only rapidly extending, but that it would quickly have become both large and important. And I cannot help contrasting its course with that of one which I had the opportunity of seeing, in its later stages, some three years ago, where the disease attacked the same parts of the face, where only the usual treatment by poultices &c. was adopted, and where (instead of a duration of about one week for the severe symptoms, and of about ten days more for recrudescence) the suffering patient passed through a morbid process which took many weeks to complete its course, and which not only caused great and prolonged suffering, with great temporary disfigurement, but even at one time appeared to threaten life itself.

As I have stated, I have now used carbolic acid in this way in several cases of carbuncle; and in all of them its application has been followed by a uniform and immediate check to its increase, and a speedy amelioration of the local conditions. When it has been applied early, it has plainly gone far to abort the disease; and when it has been commenced later, wherever it could be brought into contact with the inflamed and hardened tissue, there at least no further spreading has taken place, whilst swelling and tension have diminished, and dirty suppurating slough has quickly given place to florid healthy granulation. And, from my observation of its action, I entertain no doubt that, if it could be brought sufficiently early into contact with the spreading disease, it would be quite competent to prevent its extension beyond the degree to which it had already advanced. Unfortunately, the acid appears to have little or no influence when applied over the unbroken skin; but directly it can be brought into contact with the diseased mass, either by being inserted into the sieve-like holes, or by being applied to it after being laid open by incision, its beneficial action becomes at once manifest.

Much credit is, I think, due to the late Mr. Startin for having suggested that both boils and carbuncles might be due to the growth and spread in and beneath the skin of a parasitic development; and the efficacy of the treatment he was in the habit of adopting, the remarkable effect of carbolic acid in checking its increase, and the almost certainty with which boils in their early stage may be aborted by

applying freely to the core of the festering pimple the acid nitrate of mercury, go far to prove the truth of this opinion.

It is extremely unfortunate that the carbolic acid cannot always be brought into sufficient contact with carbuncles in their early stage—partly because of the insufficiency of the sieve-like openings, and partly because the parasite-studded (?) growth may have already extended beyond the central portion over which these are situated. But even with a very imperfect application I have observed a distinct retardation of the circumferential spread when the acid has been carefully introduced into these holes, conveying to my mind the impression that some destructive influence had been exerted upon the central root or stem of the diseased mass; and in all cases which I have hitherto observed, no extension of the disease has taken place from any part to which the acid has been fairly applied. Hitherto I have only applied it through the natural openings, or after the mass has been exposed by incision or caustic; but I think it extremely probable that a beneficial effect would be produced by the subcutaneous injection of a watery solution of the acid around its edges (after the manner in which it has lately been employed in the case of spreading erysipelas and some other diseases), or possibly the spread of a large carbuncle might be stayed by drawing through it some small loop-holed drainage-tubes, and allowing the carbolised fluid freely to percolate through these.

The strength of the solution of carbolic acid which I have employed has been about one part of the acid to four or five of the solvent (oil or glycerine), and its efficacy, I would repeat, has appeared to be limited almost absolutely to those parts with which it could be brought into actual contact; and although it appears occasionally to have produced injurious effects when used in large quantity, yet I have kept a large sloughing and granulating surface for days together constantly covered with the carbolised oil, without any harm arising, although the urine soon presented the peculiar blackish colour which has been several times observed during its employment.

I will only further add that, in looking over the various methods of treatment which have from time to time found favour with the profession, there seems to have been a constant under-current of feeling in favour of such remedies as have a more or less caustic or antiseptic (? parasiticide) influence. Terebinthinates, resinous applications, caustic potash, and several other caustics have been held by various competent authorities in high esteem, and their partial usefulness would seem to fortify the theory of the vital, the living nature of the disease—a theory which I think is greatly supported by the decided influence upon it of carbolic acid, a substance so well known to possess a special power of preventing the increase and development of low forms of life and cell-growth.

Norwich.

CONCERNING THE EARLY DAYS OF OVARIOTOMY.

BY JOHN GORHAM, M.R.C.S.

IN the year 1839 a paper of mine was published in the pages of THE LANCET, entitled "On the Propriety of Extirpating the Cyst in some Cases of Ovarian Dropsy." I am anxious to revert to that paper for several reasons, which I shall now as briefly as possible specify. At the time to which I refer (1839) I was a pupil at Guy's Hospital, occupying an advanced post, and not unfrequently taking Dr. Thomas Addison's out-patients when he left for the recess in the autumn. The patients suffering from ovarian dropsy were then, so far as Guy's Hospital was concerned, in a curious, not to say somewhat perilous position: things had come to this crisis, that no medicines, topical or internal, had been found to have any good effect, but rather the reverse, the health of the patients being deteriorated by the large doses of iodine, with not unfrequently mercurial and purgative treatment, while eventually tapping was had recourse to just for the sake of saving the patient's life, or to be repeated should the accumulation in the sac again take place.

This was the state of things in Guy's Hospital in 1839, when the late Dr. Thomas Addison stated to me, before leaving his out-patients in my charge, "Should ovarian dropsy cases present themselves, *do nothing*." I believe that in this hospital nothing was done at that time, saving only a palliative treatment, nor am I aware that at any other hospital in London was there any other treatment more successful. At this juncture I received from Mr. William West, surgeon, Tunbridge, a huge ovarian cyst just filling a large bandbox, and capable of containing, when recent, upwards of twenty pints of fluid, which cyst he had removed from a patient of his near Tunbridge. This cyst was placed in the museum of Guy's Hospital, and a paper was written and read by myself at the Physical Society of Guy's Hospital, stating the nature of the operation, and advocating its performance in future cases. The late Mr. Bransby Cooper was present at its reading, and suggested to me to take the paper up on the following Monday to the late Sir Benjamin Brodie, which I did. A few weeks after the reading of this paper the operation for the removal of an ovarian cyst was performed in Guy's Hospital for the first time, and I am not aware that any other operation had been performed in London prior to this. Unfortunately the patient died, complications attending the case. Still the operation was planted in London, and with what success the labours of Mr. Isaac Baker Brown and the more recent achievements of Mr. Spencer Wells will abundantly testify.

While writing my paper for the Physical Society of Guy's Hospital, it was by a curious coincidence that I alighted upon a description of the identical operation which had been performed by Mr. West. This description was contained in an old book which I accidentally turned up on a bookstall in Lambeth New-cut. I copied it then and there, and introduced it in my paper; and from its important bearings, added to the fact that it was written by no one less than Dr. William Hunter, it may not be out of place to transcribe it word for word:—"If it be proposed, indeed, to make such a wound in the belly as will admit only two fingers or so, and then to tap the bag, and draw it out, so as to bring the root or peduncle close to the wound of the belly, that the surgeon may cut it without introducing his hand, surely in a case otherwise so desperate it would be advisable to do it, could we beforehand know that the circumstances would admit of such treatment." Here, then, in all essential features was Mr. West's operation—the short incision, the emptying of the sac, the pulling it through the opening, and then cutting the peduncle. These four procedures have formed the basis of all the operations which have since been performed, the principal addition being the enlargement of the incision to enable the operator to separate the adhesions, if such existed prior to the withdrawal of the sac. Nothing more needs to be advanced, it is conceived, to show that Mr. William West, of Tunbridge, was in 1839 in advance of the London accoucheurs, for even after he had proved the possibility of success of the operation by demonstrating the sac at Guy's Hospital, his patient being then alive and enjoying excellent health,* still the thing was regarded with grave suspicion in the metropolis, and the first case that was treated by his plan died in Guy's Hospital after an operation by Mr. Morgan, thus offering no strong inducement to a repetition of the experiment. Even Sir Benjamin Brodie returned me my paper without note or comment, thinking, it is more than probable, that as he had nothing practically to offer on the innovation, he might as well be silent altogether. Thirty-four years have now elapsed, and ovariotomy is in this year (1874) an orthodox thing, and takes its rank with the other operations in surgery.

There is another aspect of this subject. It is a painful one; but I do not deem it right to withhold it from the members of the profession. Mr. West has been dead now many years. An only daughter survives him, who is in straitened circumstances. This lady resides at Gravesend, has a small ladies' school which scarcely keeps her, and is also an agent for governesses; but her health is bad, and she has great trouble to live. Should any member of the profession choose to lend her a helping hand, he may do so by sending direct to her address—13, Darnley-street, Gravesend. I believe that some members of the profession are

* This patient lived many years after the operation.

receiving as much as one hundred guineas for a single operation for ovariotomy. May it not be fair to ask these gentlemen to contribute a trifle to the daughter of one who stood foremost in introducing this operation to the metropolis of London, and so to the whole world?

Tunbridge, Kent.

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

EPILEPSY AND HEMIPLEGIA IN A GOUTY SUBJECT; ARTICULATING GLOSSOPLEGIA FOR SOME DAYS; RECOVERY.

(Under the care of Dr. OGLE.)

THE nature of the lesion causing the paralysis which is sometimes associated with an attack of gout is not yet fully known. It is, however, only reasonable to suppose that it varies in different cases—being sometimes an embolus, sometimes a thrombus, and sometimes a hæmorrhage; and in a few instances the hypothetical metastasis may probably have an actual existence. The groupings of the external signs can only be explained by the aid of the light which comparatively recent researches have thrown on the hitherto almost unknown regions of cerebral physiology and pathology.

The patient, William W——, aged sixty-seven, a stableman, was admitted into hospital June 13th. He had been subject to gout, and drank beer, but had not been a hard drinker. About three years previously he had had a "fit," and a second one before Christmas in 1871; both attacks occurred in the night, and after the fits he was for some time unable to do any work.

On admission, though he could be partially roused, he was unconscious, having been found in his stable in an insensible condition. He was breathing heavily, with the jaws firmly closed. The face was quite motionless. The right eye was drawn *outwards*, and the right pupil was smaller than the left one. The right arm and leg were evidently paralysed as regards motion, and the thumb of one hand was swollen, owing to an attack of gout which he had had a week previously. The heart-sounds were distant and muffled, but no valvular or other bruit existed. The subchloride of mercury, followed by castor oil with a drop of croton oil, was administered, and produced free action of the bowels; and strong beef-tea was given. Soon afterwards he regained consciousness.

At the following day's visit the patient was sensible. He was then quite able to protrude the tongue when bidden. He could not, however, remember his own name, though he clearly understood what was said to him; and he fully knew when the bladder required relief. He had much regained the power of the right arm. There was some want of power in the muscles of the right side of the face, as evinced by imperfect ability to close the right eye as compared with the left; but there was no want of general equilibrium in either side of the face. There was some degree of want of sensibility of the skin of the right arm and leg. There was no difference in the temperature of the two sides of the body. The urine contained a large amount of albumen, and was very acid and very abundant. No urinary casts were found in it. On this day he became unable to protrude his tongue, though he constantly made efforts, and was able to open his mouth freely. The sensibility of the tongue was unimpaired. This inability to put out the tongue continued for five days. On the sixth day the tongue could be protruded as usual; and about this time the fingers of the left hand became affected by gout. This gradually subsided under the use of aperients and the citrate of potash, with wine of colchicum, every four hours. The patient soon left the hospital able to work, a little albumen in the urine only still remaining.

Dr. Ogle observed that the case was of a kind which in olden days would probably have been looked upon as an instance of metastasis of gout to the brain. The sudden access and the removal of paralytic symptoms on the approach of gout would, in the eyes of Dr. Pavy for example, have obtained for the case the designation of gouty paralysis.

Dr. Ogle spoke of other cases in which the inability to protrude the tongue remained after other paralytic symptoms had passed away. He pointed to some instances of this having occurred after accidents, dwelling specially on an interesting illustration given by a case recorded by Dr. W. Sinkler in Brown-Séquard and Sequin's "Archives of Scientific and Practical Medicine,"* of fracture of the lower dorsal vertebræ, with bruisings of the head, in which convulsions and loss of speech and hearing occurred, and in which the patient became quite unable to protrude his tongue. He quite recovered, excepting headache by which he was affected, but remained still unable to put out the tongue.

CONSTANT VOMITING AND HÆMATEMESIS REMOVED BY THE RELIEF OF CONSTIPATION BY APERIENTS IN AN HYSTERICAL GIRL.

(Under the care of Dr. OGLE.)

The patient was a young girl, Eliza B——, somewhat hysterical, who had originally been admitted into the surgical wards, but was transferred to Dr. Ogle, who found great pain over the whole of the abdomen and much constipation to accompany the vomiting and hæmorrhage; but the state of the pulse, condition of breathing and of the skin, and also the temperature, were adverse to any supposition of the existence of inflammation. Under the use of purgatives—calomel and jalapine—and small doses of sulphate of magnesia, with enemata and suitable mild diet, all symptoms by degrees disappeared, the pain being greatly relieved by hot spongio-piline saturated with laudanum applied to the abdomen, and the vomiting by hydrocyanic-acid draughts. The amount of alvine evacuation which was expelled under the use of the aperients was immense, and this abundant relief went on from time to time for two or three weeks, even when she was taking but little solid food, indicating the degree to which fæcal accumulation had been going on. Under the subsequent use of valerian, with steel and quinine, and the use of the cold shower-bath, the patient perfectly recovered.

UNIVERSITY COLLEGE HOSPITAL.

CASES OF HERNIA.

(Under the care of Mr. BERKELEY HILL.)

THE following is the conclusion of Mr. Hill's series of hernia cases commenced at page 128, and continued at page 196.

The subjoined case illustrates the benefit which frequently follows the use of the pneumatic aspirator in cases of strangulated hernia. It may be remarked that, as a rule, when this proceeding fails to do good, it does not produce any injury, and in no way interferes with any subsequent operation. It may, therefore, be attempted as one of the preliminary tentative measures. In some instances, however, its effects have not been merely negative, and in a case in which Mr. Hulke used the aspirator liquid fæces escaped, and continued to flow from the wound after the needle had been withdrawn. This untoward event was accounted for by the fact that as a result of inflammation in the walls of the strangulated intestine the various tunics had become fixed and matted together, so that they did not glide over one another and close the puncture made through them, nor could the mucous membrane "pout" through the aperture and close it. It is accordingly desirable, before using the aspirator, to ascertain, if possible, the mechanical and physiological conditions of the obstructed portion of the bowel. It follows, therefore, that although the puncture of

* See No. IV., 1873, p. 311.

a strangulated hernia may not always be free from danger, it can rarely be so serious as the condition which it is intended to relieve, and certainly does not deserve the unqualified disapproval and condemnation that a worthy examiner at the Royal College of Surgeons bestowed upon it when he told a candidate, who had suggested that in this very case aspiration should be tried, that if he did so he would certainly kill the patient.

Strangulation of irreducible hernia; evacuation of fluid contents of sac by aspiration; relief of strangulation.—D. S——, aged seventy-two years, admitted Nov. 10th, 1873, having had a hernia for six years, which was habitually reduced by the patient himself, though on two occasions he had to come to the hospital, where it was reduced by the surgeon. On November 9th the hernia again became unmanageable, and he came the next day to the hospital. The surgeon in the out-patient's room being unable to reduce it, he was admitted into the ward. At this time he was in no pain, had not vomited or passed wind per anum. In the right groin was an elastic swelling without impulse or gurgling. Ice was continuously applied.

The next day the patient was in an almost similar condition. A little griping pain and inclination to vomit, but no more.

Nov. 12th.—The patient being under chloroform, the taxis was applied, and once or twice gurgling elicited, but without reducing the mass. The aspirator then drew off about three ounces of viscid fluid, with no special odour. The swelling being now relaxed, the lower part was found to be soft and yielding, the upper part hard and firmly fixed in the inguinal canal. While attempts at reduction were being made a bubbling was felt in the upper part, and while the patient vomited an impulse was transmitted along the canal. The next day severe diarrhœa set in, which continued through the three following days, the tumour remaining in its relaxed state, sometimes allowing an impulse to be transmitted through its length, but not often.

The man did very well after this, though the fluid part of the swelling having been reproduced, Mr. Hill evacuated it a second time with the aspirator, but again failed to restore the protrusion to the abdomen. No irritation, pain, or symptom of any kind followed these procedures. While in hospital the patient was sent to the College of Surgeons for the examination of candidates for membership, a diversion he enjoyed much, being particularly tickled by overhearing an examiner rebuke a candidate who suggested tapping the tumour by saying, "Do you know, Sir, you would kill him if you did so." The patient had already undergone tapping twice without the smallest inconvenience.

On Nov. 27th the patient, wearing a well-fitted bag truss, was discharged in good health.

BRISTOL GENERAL HOSPITAL.

ACUTE SOFTENING OF SPINAL CORD.

(Under the care of Dr. CLARK.)

FOR the following notes we are indebted to Mr. J. Howell Thomas, physician's assistant.

Ann M——, aged eleven years, was admitted Dec. 31st, 1873, with paraplegia. About a week before admission the patient was seized with shivering and pains in her limbs, but she continued to go about until three days ago, when she suddenly lost the use of her legs. She never had any convulsions, nor was there any history of an injury to the back.

On admission the patient complained of pain in her back, along the vertebral column; the pain she stated to be worse in the cervical region. Could move her head about freely. The pain was not increased on pressure. There was complete paralysis of motion of the lower extremities. No reflex action. Sensation was diminished in the right lower extremity, and there was absolutely no sensation in the left. Complete loss of power over bladder and rectum. No abnormal physical signs in thoracic viscera. Urine acid; specific gravity 1018; no albumen; lithates. Optic discs normal.

Jan. 1st.—Temperature: evening 100·4°.

2nd.—Temperature: morning 99·4°, evening 100°. There is now no sensation in the right lower extremity. Bed-sores on the buttock.

3rd.—Temperature: morning 100°, evening 101°. There is partial paralysis of the upper extremities. Patient is unable to raise her arms as high as the shoulder. She is able to pronate and supinate the forearm, and was able to hold her knife in her hand to cut some bread this morning, but could not raise it to her mouth. Sensation diminished, but not lost.

4th.—Temperature: morning 99·4°, evening 99°. Vomited this morning. Says she feels worse. Her condition remains about the same.

5th.—Temperature: morning 98·4°, evening 98·2°. The pain in the cervical region is worse this morning; it is not increased by pressure.

6th. — Temperature: morning, 100·4°; evening, 98·4°. Urine alkaline; specific gravity 1026; ammoniacal; pus, albumen, &c. There is some cystitis. Patient does not complain of pain over the bladder, except on pressure.

7th. — Morning temperature 98·4°. The paralysis of the upper extremities is increasing; patient can just move her fingers, but is unable to raise her arms. — 1.30 P.M.: Difficulty of breathing came on; lungs were found to be congested.

Continued in much the same state, the difficulty of breathing increasing, until death at 5 P.M. on Jan. 10th.

Autopsy (Jan. 12th). — The brain weighed 2 lb. 8 oz.; the veins on its surface were congested; its substance was pale, and there were several minute points of injection in it. The spinal cord weighed ¾ oz.; the membranes were healthy; there was a quantity of serous fluid in the arachnoid sac; the cervical portion of the cord was soft and disintegrated; the rest of the cord was firm, but on making a transverse section there were several points of injection in it. Lungs congested; pleuritic adhesions on the right side. The heart weighed 4½ oz., and was healthy. Liver, spleen, and kidneys normal, but intensely congested. Stomach, intestines, uterus, and ovaries normal. The bladder was in a state of acute suppurative inflammation; the coat was very much thickened, and the mucous membrane lining the interior was covered with a yellowish-grey slough.

HÔPITAL ST. ANTOINE, PARIS.

CASE OF RHEUMATISM OF THE TENDONS.

(Under the care of Dr. M. PETER.)

THE patient, aged thirty-five, had been suffering for a few days from pain in the situation of the joints of the knees and ankles. No swelling or redness was to be observed in the painful situations; no general symptoms of rheumatism; no fever. The pain was developed when the finger was moved carefully along the head of the fibula, on the tibia in the situation of the aponeurotic expansion of the tendons, and behind the malleoli. Movements of the articulations were painful through the straining exerted on the inflamed tendons.

M. Peter has often observed such cases of rheumatic inflammation of the tendons and serous bursæ, unconnected with gonorrhœa. The pain is to be sought after, not with the hand, but with the finger, carefully exerting pressure on the situation of the tendons and bursæ—for example, behind the ankles, between the biceps and head of the fibula, above the aponeurotic expansion of the knee, behind the calcaneum and the olecranon, in front of the patella, in the situation of the great trochanter, &c. The disease is really an extenuated form of rheumatism, and constitutes rheumatic synovitis. It rarely presents cardiac complications. It is seldom accompanied by any great fever, though sometimes the fever may be somewhat high, and the evening temperature may rise to 39° or 40° Cent. There may be slight œdema or not in the situation of the inflamed tendons. Likewise the surface may be discoloured or not. It is much milder than articular rheumatism, and does not require any energetic treatment.

A CORRESPONDENT of the "Cork Constitution" states that in the south of Ireland a fatal disease is destroying the poultry, which are dying off by hundreds without any apparent cause. It would be interesting to get the results of a careful post-mortem examination of one of the birds.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MARCH 10TH, 1874.

DR. E. H. SIEVEKING, VICE-PRESIDENT, IN THE CHAIR.

MR. SAVORY showed the Upper and Lower Jaw-bones from a case of Necrosis from Phosphorus, and gave an account of the case.

Mr. JOHN BIRKETT said the case was a very remarkable one, and he thought this was the first time in which the whole of the lower jaw had been replaced. He referred to the case of a young child he saw many years ago who suffered from cancrum oris, and a part of the lower jaw exfoliated and the lost part was reproduced; the patient did well, and was now about thirty years old and had a useful lower jaw. The fact which he had just ascertained from Mr. Savory, that sensation remained in that part of the face supplied by the nerve passing through the mental foramen, was interesting. In the case he had referred to sensation was as perfect as before, though it could scarcely be believed that a piece of the jaw extending posteriorly to the mental foramen could be removed without injury to the nerve.

Dr. DRYSDALE asked the cause of the patient's death; and if from the effects of phosphorus, what was the state of the viscera.

Mr. COOPER FORSTER thought the case was worthy of a more detailed account, and hoped Mr. Savory would favour them with it. He would like to know how he had removed such large pieces of bone entire.

The PRESIDENT said he was much interested in this question, and would be glad to know if phosphorus disease was as frequent now as formerly. About twenty-five years ago he was engaged in an inquiry on this subject, and had visited most of the match manufactories in the East-end of London. He found that the frequency of the disease was in direct proportion to the badness of the ventilation. In one manufactory where this was attended to there was not one case. He remembered seeing one man who had himself removed the whole of the lower jaw by sawing it across in the middle; he did not think the condyles had come away; the bone was reproduced.

Mr. SAVORY, in reply, said that as the disease had been recorded, he thought an abstract was sufficient. With regard to the removal of the lower jaw, this was very simply effected; it was performed seven months after the first symptoms of mischief about the face; he divided the bone in the middle line, and each half was drawn out without force or hæmorrhage. When the jaw was removed there was no evidence of new bone, but a few weeks after new bone was felt in the left angle. The boy was about eighteen, stunted, and looked about fourteen; he was 5 ft. high. He had been employed in Bryant and May's factory for five years. During the last two he had been employed in preparing the phosphorus paste; this is made by heating over hot water phosphorus and gum, the mixture requiring to be kept constantly stirred. The following points were to be noticed: first, the extent of the necrosis, all the lower jaw and condyles, and both upper jaw and the adjacent bones, being involved; secondly, the very complete reproduction of the lower jaw, which was reproduced in six months. On carefully examining the specimen, a normal periosteum was found in contact with the bone, so that probably it had been separated, and so took part in the reforming of the bone. Then there were two teeth in the lower jaw, one of which was carious; all the teeth were in the upper jaw. The patient died of exhaustion from the great discharge.

ON THE RELATIONS OF ASTHMA TO SKIN DISEASE.

BY GEORGE GASKOIN,

SURGEON TO THE BRITISH HOSPITAL FOR DISEASES OF THE SKIN.

After mentioning that the hereditary character of psoriasis has been much exaggerated, according to the usual acceptation of the term hereditary, the author affirms that its connexion with asthma forms the most conspicuous feature of this complaint, being discoverable in the history of at least one-third of the cases. In a continuous inquiry, asthma has been sought for in 2000 cases of skin disease, exception being made for those of a parasitic and syphilitic class; and the result has been its appearance in 141 cases, of which 65 are cases of psoriasis. Further observations in the course of the paper affirm the dependence of skin disease on the phthisical and arthritic diatheses in the great majority of cases; their influence being observable, with very few exceptions, in those families which present instances of hereditary transmission.

Dr. DRYSDALE said he had seen hereditary ichthyosis accompanied with emphysema in four members of the same family. He had also seen a case of alopecia of the whole scalp accompanying emphysema. Other cases of chest disease were attended with skin diseases. He did not understand in what way Mr. Gaskoin used the term asthma.

Dr. CHURCH said he, too, would be glad to hear a definition of asthma. Mr. Gaskoin had spoken of a large number of cases in his paper; he did not know if he referred to the spasmodic form; if so, in his experience it was very rare. But if by asthma Mr. Gaskoin meant emphysema and pulmonary catarrh, which was very common, then the connexion between cutaneous diseases and chest complaints was explicable.

Dr. SYMES THOMPSON said the relation between asthma and psoriasis had been pointed out before, but no statistics, as in the paper, had been brought together; and he thought the paper was valuable in this respect, provided we knew what was meant by the term asthma. Since arsenic was said to have been of benefit in the cases, he would suppose the asthma was of the spasmodic kind, as arsenic had proved of great service in such cases.

Mr. GASKOIN said he had met with psoriasis associated with asthma much more frequently than was generally supposed. The relation to phthisis was not so frequent. He had taken as asthma what was called so by the people, and did not often find it was the dry spasmodic kind. He had taken every proper precaution to ascertain the facts.

A paper followed "On the amount of Carbonic Acid found by experiment in the Air on board Wooden Frigates." By LEONARD H. J. HAYNE, M.D., R.N., Surgeon to H.M.S. *Doris*. (Communicated by Dr. SYMES THOMPSON.)

CLINICAL SOCIETY OF LONDON.

FRIDAY, MARCH 13TH, 1874.

MR. PRESCOTT HEWETT, PRESIDENT, IN THE CHAIR.

DR. BUZZARD showed a patient, aged forty-six, who had recovered from an attack of General Paralysis, supposed to be of Syphilitic Origin. The man had been brought to the National Hospital for Paralysis on January 8th, 1873, with paralysis of both facial nerves, of all four extremities, and incomplete paralysis of respiration, deglutition, and of the right sixth nerves, together with general cutaneous anæsthesia. His condition was so grave that he was at once admitted. He could not lie down, and could only take fluid nourishment by spoonfuls. His attack had commenced one month previously with numbness in the finger-ends, and weakness of the legs and arms, which progressed so rapidly that in three days he could not leave his chair. One week after the onset his speech became thick, and he felt a sense of constriction round the waist. After another week his powers of deglutition and breathing were involved. He continued to get more and more feeble, so that when admitted he could not move his legs, and had only the slightest power of using the muscles of his thighs and arms. He was permanently lame in the right leg, from an attack of infantile paralysis in childhood. His health previous to the attack had been uniformly good. There had been no injury, nor diphtheria, nor exposure to cold; and the attack was unaccompanied by fever, pains, or muscular contractions. His pulse on admission was 76, and his temperature 99°. He had suffered from a chancre and bubo fourteen years before, which were not followed by sore-throat or skin-eruption. On admission he was placed on a water-bed; beef-tea, eggs, and wine were ordered, and ten-grain doses of iodide of potassium given three times a day. Within twenty-four hours he had improved, and in a week could lie down, could close the right eyelid to some extent, and could swallow solid food. The muscles of the legs, in which contractility to faradaism had been abolished, now responded slightly to the induced current. In four days more the right eye could be com-

pletely closed, his breathing was no longer difficult, and his limbs were regaining power. At the end of January he could close both eyes; and in a few weeks more all the facial muscles had recovered. Towards the end of March he could stand with assistance, and on May 6th he could walk with some help. On May 21st, four months and a half after admission, he was discharged, and a week or two afterwards resumed his employment, which he has since regularly carried on. At the present time he shows no traces of his attack. His treatment consisted of iodide of potassium in gradually increasing doses, amounting at last to sixty grains three times daily, and this was followed by subcutaneous injections of the chloro-albuminate of mercury for two months. (For the formula, see *Lyon Méd.*, June, 1872.) Dr. Buzzard was of opinion that the attack was due to syphilitic thickening of the dura mater about the basilar process and upper part of the spinal column, causing pressure upon the pons Varolii and spinal cord.

In reply to Mr. Spencer Wells and Dr. Moxon, Dr. BUZZARD said that he had tried the subcutaneous injection of mercury in this case, because he thought that if an eligible solution could be discovered the injection of a few drops by a fine syringe would be preferable to the nasty method of inunction, or the troublesome one by calomel vapour-baths, in cases in which administration by the mouth disagreed. The quantity of mercury employed would, moreover, be smaller, and determined most accurately. He chose the chloro-albuminate solution of Dr. Staub, because that had been described as not causing abscesses, the great objection to all others. In three or four cases in which he had tried this liquid, although a good deal of local irritation had sometimes followed, there had been no suppuration.

Mr. BRUDENELL CARTER asked whether the action of the iodide of potassium was thought to prove the syphilitic character of this case.

Dr. BUZZARD said that his diagnosis was founded partly upon the character of the disorder, which was evidently due to pressure upon nerve-substance, and not disintegration of it. The source of such pressure would almost necessarily be in the membranes; and the mode of onset and progress of this case were just what would be occasioned by a thickening of the dura mater such as syphilis would cause, or by the growth of gummata. Other sources were excluded by the history; and the only antecedent in the case was a syphilitic infection. The clinching point was the immediate improvement and rapid complete recovery of the patient under specific treatment.

The hour for the adjourned discussion upon pyæmia having now arrived, there was no time for further consideration of this very interesting case.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE annual meeting, for the election of officers and passing the balance-sheet, will be held on Wednesday, the 8th April next, at 3 P.M., at the rooms of the Century Club, 6, Pall Mall-place (opposite the Oxford and Cambridge Club, Pall Mall), Dr. J. Lush, M.P., the President of the Association, in the chair.

On this occasion matters of considerable importance, affecting the status and remuneration of the service, will come before the meeting for discussion.

The Council consider that the present moment is a critical one for Poor-law medical officers, as the Premier has committed himself to the policy of sanitary reform, and many of his immediate colleagues in the Government have pledged themselves to deal with the question of local taxation, with the view to its more equitable incidence. The importance of this, as affecting the interests of the Poor-law medical officers, must be evident; the Council therefore trust that there may be a good attendance.

As the expenses of the Association during the next two or three months will be very considerable, the Council trust that all arrears of subscriptions may be paid to J. Wickham Barnes, hon. secretary, 126, Gower-street, Bedford-square.

WE understand that Dr. Rutherford is a candidate for the vacant office of assistant-physician to King's College Hospital.

PRINCIPLES OF
HOSPITAL CONSTRUCTION.

BY JOHN SUTHERLAND, M.D.,
Member of the Army Sanitary Commission, &c. &c.; and
CAPTAIN DOUGLAS GALTON, F.R.S.,
Director of Works (Office of Works), &c. &c.

No. II.—HOSPITAL SITES.

IN our first paper we have called attention to the necessity of studying economy in hospital construction, not only in the interests of the charity, but in the interests of the building; and we shall now proceed to discuss the next question—namely, "What principles ought to guide the hospital architect in preparing his design?"

The reply to this question must be that there are certain great leading requirements which ought to be embodied in every hospital plan; but, besides these, there are other requirements which must be attended to, depending on the class of cases for which the hospital is to provide accommodation. If a medical or surgical school is attached to the hospital, this also would, in certain particulars, require a modification of plan.

Foremost among the general requirements alluded to is a healthy site; but this element depends to a great extent on the possibilities of each case. A hospital site should never be low or damp, and incapable of drainage, or close to damp, wet, unhealthy ground, or to nuisances, or to trades giving rise to dangerous aerial pollution, or to exposed banks of tidal streams. It should not be placed on or at the foot of a steep slope, nor on a site receiving the drainage of higher ground.

It is possible that most if not all of these unfavourable sites might be avoided in practice. But it is more difficult in large hospitals situated in towns and cities to avoid another class of unfavourable conditions—namely, those of close-built districts, deficient in ventilation, where the air is stagnated by numerous obstacles, and by high walls and lofty buildings, warehouses, manufactories, and the like. There have been instances of hospitals not situated in towns in which recovery has been delayed on account of external free aerial movement having been interfered with by a screen of trees.

The main difficulty in obtaining a good hospital site in towns of a certain size arises from the state of the town ventilation. Hence the great advantage of placing hospitals, whenever practicable, at the outskirts of towns, where on one side at least pure air would blow over the building, or as near as may be to the open country; but if in the town, at all events close to some open space within the town. Town air by itself is not the best air for sick or wounded people, but the evil is much increased if the hospital site is closely surrounded by narrow populous streets.

The requirements as to site are thus dryness, healthiness of surroundings, and facility of external movement of the atmosphere. The last of these is indispensable, because without it no hospital can be sufficiently ventilated. It is by no means enough for this purpose that stagnant outer air should be admitted in any possible quantity to the wards. The influence of a moving atmosphere on emanations from the human body, whether in health or disease, is very different from the effect of mere bulk or quantity. Moving air indicates oxygenation and destruction of organic impurities in it. Stagnant air containing organic matter is a dangerous neighbour if the organic matter is undergoing putrefaction.

These general considerations on the question of hospital sites interest the hospital architect as much as the hospital

committee, and the practical lesson which they teach is that this question should be very carefully considered; that the best site, or, at all events, a sufficiently good site, should be found before a plan is prepared; that the plan should be adapted to make the best use of the site in the interests of the sick; and, above all things, that a plan should not in the first instance be prepared in reference to purely architectural effect and then a site selected on which to build it. The site is in too many cases a fixed quantity in the problem of hospital construction; the architect, as a rule, has not much to do with its selection, consequently it becomes the function as well as the duty of the architect to take the site as it is provided for him, and adapt his plans to it.

But, in doing so, there are certain necessary conditions to be observed. For example, if the chief ventilation of the site comes up a wide open street, there is a strong temptation to block up the ventilation by constructing an architectural front, perhaps containing only the administrative offices to face the street, while the wards, whose ventilation is the first thing to be considered, are thrust away behind, or to one side. Again, there are existing examples of recently constructed hospitals, professing to embody every recent improvement, in which one side of the wards forms the line of a narrow public street, the opposite side of the street being formed by a line of houses.

The only way to avoid mistakes of this kind is to study the natural ventilation of the district, and, if possible, to arrange the block plan so that the prevailing air currents may blow against one side at least of each ward in the building. By adopting this precaution, the outer air pressure would ensure a moving atmosphere across the interior of the ward.

When hospitals are built in the open country, or are close to large open spaces, difficulties regarding external ventilation are not so likely to occur as in densely peopled towns, and the main direction of axes of wards may be safely arranged so as to afford sunlight on both sides of the ward.

The next point regarding hospital sites requiring discussion is their area, and this must be determined by the locality where it is proposed to build. In an open district, safe from encroachments, the open area beyond the hospital grounds would count as hospital area in as far as regards light and ventilation, and in such cases it would be sufficient to provide ground of such a form and area as would enable all the blocks of building to be separated from each other by a distance equal to twice their height.

In a town district enclosed among houses the area should provide not only for distance of blocks, but for isolation of the whole hospital from neighbouring houses. The aim to be kept in view is to provide ground at the rate of not less than one acre for every hundred beds which the hospital is intended to contain. Half as much more would be amply sufficient for securing every advantage which a town site is capable of. One acre per hundred beds should be considered a minimum quantity.

Lastly, the best subsoil for a hospital and its vicinity is a self-draining, gravelly soil. The worst is an undrained, wet clay. The former secures the presence around the wards of a temperate, dry air. Wet clays keep the atmosphere over them damp, cold, and foggy, on a sudden change of temperature.

If the locality is all on clay, the site selected should be carefully under-drained all round the hospital building, by drains at least four feet deep, and at from one-third to one-half less distance apart than is adopted in the case of agricultural drainage.

It is seldom that the site necessarily selected for a hospital does not present some one or other unfavourable features, but every departure from healthy qualities in the site has to be counteracted as far as possible by extra cost in the structure, resulting from extra floor space or cubic space in the wards, or by engineering works outside the building. Hence a healthy site is an economical site, both in first construction and in assisting in the rapid cure of the sick.

IRISH CONJOINT SCHEME.

A MEETING of the fellows of the Royal College of Surgeons in Ireland was held on Thursday, the 19th inst., in the hall of the College, for the purpose of considering the Conjoint Scheme of Examination put forward by the University of Dublin, the King and Queen's College of Physicians, the College of Surgeons, and the Apothecaries' Company in Ireland. The meeting was convened in accordance with the provisions of the charter, by a requisition signed by 15 fellows, and addressed to the president, Dr. Denham. It will be in the recollection of our readers that the scheme, as propounded by the co-operating bodies, was laid last year before the General Medical Council, and has been sanctioned, with but a most trifling alteration, by that body.

The proceedings were opened by Dr. Kidd, who proposed a resolution deprecating the acceptance by the College of any scheme of conjoint examination as being likely to prove injurious to the interests of the public as of the profession. This resolution was seconded by Professor Stokes, son of Dr. Stokes, the Regius Professor of Medicine in the University of Dublin, in a speech in which he supported Dr. Kidd's general proposition, from a consideration of the amount of injury which the present scheme would inflict upon varied interests, public as well as private. To Dr. Kidd's resolution an amendment was proposed by Dr. Robert M'Donnell, objecting to the proposed scheme as being injurious to the interests of the public and of the profession, which amendment, seconded by Dr. Mapother, was adopted by so large a majority of the fellows present (some fifty in number) that no division was deemed necessary, and it, with a resolution recommending it to their earliest consideration, was forwarded to the Council of the College.

By the provisions of the charter the executive powers of the College are vested in the Council, a body annually elected by the votes of the fellows at large, and by the same charter, beyond the power of electing annually the Council, the powers of the fellows are restricted to making recommendations on such matters as to them may seem fit, to the Council so elected. However, the Council have always most respectfully entertained all such recommendations, and already two meetings of that body have been held for the purpose of considering the present recommendations of the fellows, and we believe that we are substantially correct in stating that the Council, by a very large majority indeed, have arrived at the conclusion that, whilst in their opinion the honour and dignity of the College are involved in their keeping the engagements which on behalf of the College they entered into with the other co-operating bodies and with the General Medical Council, and that whilst, therefore, they feel themselves pledged to the principles of the Conjoint Scheme so agreed upon by the co-operating authorities and sanctioned by the General Medical Council, still they are most willing to consider any objections which may be alleged against the details of the scheme; and for that purpose a committee was appointed to report at an early date to the Council.

THE DISCUSSION ON PYÆMIA.

To the Editor of THE LANCET.

SIR,—In your report of the discussion on pyæmia at the Clinical Society last Friday, I am reported to have said, "Septicæmia is a better term, or even hyperæmia." The last word is incorrect. What I did say was, "Septicæmia or ichorhæmia."

I also said "cleanliness," not "clean linen." May I ask that these errors should be rectified.

I am, Sir, yours faithfully,

London, 20th March, 1874. J. FAYRER.

THE LANCET.

LONDON: SATURDAY, MARCH 28, 1874.

A CLEAR, logical, and scientific definition of the disease known as Pyæmia is, we fear, a desideratum not easily attainable; yet, if we employ the term at all, it is of the highest importance that a distinct and definite meaning should be attached to it, so that the same disease should be always indicated by the same term. If different persons attach different meanings to the same word, it is evident that it is impossible to engage in any profitable discussion until all the misconceptions by which the definition has hitherto been encumbered have been cleared away. If this had been kept more prominently in view at the recent discussion at the Clinical Society it is highly probable that, instead of having now to attempt to reconcile things apparently contradictory, we should have been engaged in registering some of the fixed and settled clinical and pathological facts concerning pyæmia. Many authorities object entirely to the word "pyæmia," and deny the existence of such a pathological condition. Taken in its strict etymological sense, the word is undoubtedly a misnomer; but provided that this fact is always recognised, and that only certain symptoms and lesions, and no other, are comprehended by the term, it is of small importance whether we designate the disease by this name or by that. With this restriction, therefore, pyæmia may be defined as a diseased state of the general system, in which high temperature, accompanied by severe rigors alternating with profuse sweatings, supervene on an inflammatory or suppurative process. The blood, which is poisoned and unfit to perform its normal functions, contains an excess of white corpuscles and of fibrin. There are, moreover, nervous symptoms of a low type; and distributed over various parts of the body may be found diffuse and metastatic inflammations and suppuration, which after death are recognised as hæmorrhages, infarcts, consolidations, softenings, and suppurations in the joints, serous cavities, and internal viscera. The veins adjoining the suppurating tissues usually contain clots in a state of disintegration, or softened at the centre into puriform fluids. The disease, as thus described, is well known, and for the most part easily recognised. There are, however, cases which sometimes show themselves in which there is evidence of intense blood-poisoning, to which the patient may rapidly succumb, or from which he may ultimately recover without the occurrence of diffuse or secondary inflammation. This condition, which has been called "septicæmia," is by some regarded as only a stage of pyæmia, but by others it is thought to be a definite and distinct disease, which, although supervening on inflammatory processes, is dependent on a cause altogether different from that of pyæmia. There is also another kind of general reaction following wounds, which has been designated "traumatic fever." In the latter there is a high degree of temperature, probably due to the absorption of some of the early inflammatory products or blood which have undergone degenerative changes. There are therefore three different conditions which may follow the receipt of an injury, and occur during the inflammatory or suppurative processes. These have been named by BILLROTH traumatic and inflammatory fever, septicæmia, and suppurative fever or pyæmia. This classification, it will be seen, corresponds very closely with that proposed by Mr. CALLENDER in his remarks at the Clinical Society, in which he described three forms of blood-poisoning supervening on wounds—viz., primary septicæmia due to the absorption of the acrid and irritating fluids thrown out into the wound within the first twenty-four or thirty-six hours; secondary septicæmia, the result of absorption of products arising from the decomposition of residua, whether those residua be sloughs or matter passing into a putrid state; and, lastly, thrombolosis, which appears to include the ordinary typical cases of pyæmia, in which there is plugging in the veins, disintegration of the clot, and dissemination of the poisoned, broken-up fragments, giving rise to the secondary deposits in the internal viscera. Now, although some cases may present themselves in which it is difficult to determine whether they should be placed under this or that category, it is generally sufficiently easy in practice to determine the nature of any individual case. Seeing, then, that tolerably well defined lines of distinction have been marked out and widely accepted, we are opposed to any unnecessary transgression of these limits. It must be observed, however, that many excellent authorities, chief among whom is Mr. SAVORY, deny that there is any essential distinction between septicæmia and pyæmia so called—that septicæmia is but an early stage of pyæmia due to the absorption of a large quantity or a powerful dose of the morbific material, which destroys the patient before the secondary changes have had time to occur. This is doubtless true in some cases, but not in all; for there is a form of septicæmia, which is not unfrequently recovered from, which may be accidental or experimental, from the absorption of putrid matters or some of the products of decomposition. Frequently in these cases no secondary or metastatic changes take place. It may therefore reasonably be conceived that, while a condition of septicæmia may be merely the early stage of what would become in time a genuine pyæmia, there is another form of septicæmia in no way or only remotely connected with the disease commonly known as pyæmia.

It is no doubt true that in every case of pyæmia there may be distinguished two separate processes—the toxic and the mechanical; the latter of which leads to the formation of secondary deposits of various kinds, the ulterior changes in which will greatly depend on their nature and quality. These two processes are, however, intimately associated and practically inseparable, neither separately being efficient to produce all the phenomena of genuine pyæmia. The true nature of the toxic matter which gives rise to the blood-poisoning in pyæmia, its origin and the mode of its operation, are not yet fully known. These are, indeed, the *questiones vexatæ* of pyæmia; for the mechanical processes are capable of a ready explanation, provided that we knew what it is that produces the profound alterations in the character of the blood, and which

spoils it for the performance of its proper functions. The fact that pyæmia is generally preceded by the suppurative process, and especially when that process has its seat in bone or tissues freely supplied with veins, has naturally led to the opinion that the poison is in some way or another connected with suppuration; and it has, indeed, been affirmed that the morbific material arises from the decomposition of pus, and that this material is then absorbed into the venous system, leading to disintegration of the thrombi which form in veins, and then poisoning in some manner the general mass of the blood. Chemists, as BERGMANN, VERNEUIL, and Dr. B. W. RICHARDSON, have even isolated a principle, sepsin or septin, which they assert is capable of inducing pyæmia. This principle is described as an alkaloid which is generated by the decomposition of albuminoid matter. But against the specificity of this body it is maintained that septicæmia and metastatic inflammation and suppuration may follow the absorption of some of the other products of decomposition.

The opinion that the *materies morbi* is something which is primarily developed in decomposing pus, and that this morbific element is directly absorbed into the general system by the veins or lymphatics, derives its chief support from the numerous and careful experiments of VIRCHOW. But this pathologist attempted to show that the pus-corpuscles were themselves altogether negative in their action; and in proof of this he asserted that pus-corpuscles as such could not pass into the venous system without producing symptoms altogether different from those of pyæmia, and he showed that, as far as the lymphatic vessels were concerned, it is impossible for a particle the size of a pus-corpuscle to pass through the fine ramifications of a lymphatic gland, so that it could not be absorbed by this channel. VIRCHOW therefore explains the phenomena of pyæmia in the following manner: Unhealthy suppuration is set up in a wound, and the ichorous fluid which results from the decomposition of the pus, penetrating into the thrombi which have formed in the adjacent veins, causes them to disintegrate and become disseminated through the capillary system, giving rise to the changes known as secondary deposits. But although this view affords an intelligible and clear explanation of many of the effects of pyæmia, some of the secondary lesions are left unaccounted for. There are, for example, lesions occurring in the second set of capillaries beyond the original wound, while the first set of capillaries altogether escape. Hence a great difficulty in the way of the universal adoption of the belief in the embolic origin of all secondary lesions presents itself. It has, however, since been shown by O. WEBER and others that some particles, especially floccules of pus, may pass one set of capillaries, but become entangled in another set. But even this explanation will not account for many other secondary inflammations, especially those of the pleura, skin, and joints.

On the other hand, some have alleged that the poison is a miasm which possesses no specific properties, but which exists whenever the atmosphere becomes unduly charged with organic matters, and which may attack persons through the medium of wounds, the mouth, the lungs, or intestines. This miasm, which consists of dry particles of organic matter, pus-cells, epidermic cells, and perhaps germs, is stated to float in the air, and to be thus carried from patient to patient. When these particles come in contact with a wound, they inaugurate certain changes in the wound, which result in the production of poisonous material, which is absorbed into the general system by the veins and lymphatics. Many observers, indeed, have shown that such particles do actually exist in the air of hospital wards, and they further maintain that these may be the bearers of poisons, which may be absorbed by any opened wound. It follows, therefore, that, according to believers in this doctrine, the ventilation of wards and the constant purification of air becomes an all-important element in the prevention of pyæmia.

In favour of the view that the toxic matter is developed in decomposing pus is the frequent supervention of pyæmia on suppurative processes in localities favourable for the retention of pus and its subsequent decomposition, and the ready absorption of the morbific elements by the adjacent veins. One of the most frequent antecedents of pyæmia is osteo-myelitis. In this affection the pus accumulates in the interstices of the bone and the small venules, which, on account of their intimate connexion with the osseous canals, are unable to contract, are constantly bathed with pus, and are thus, as it were, always ready to receive the poisonous materials which may be developed by decomposition of pus. When once the morbific matter has gained an entrance into the osseous veins it is readily transmitted to the systemic veins by means of the free communication which DEMARQUAY and others have shown to exist between the two sets of vessels.

But Dr. BURDON-SANDERSON maintains that the morbific material of contagious disease in general consists, not of substances chemically dissolved in infective liquids, but of extremely minute particles suspended in it—of organisms, in fact, which he calls microzymes. In the experiments the results of which were recently published in the Pathological Society's Transactions, he asserted that in all infective inflammations in the lower animals microzymes abound in the exudation liquids; and that the same forms are also to be found in the blood of animals when in a state of acute infective fever. He further asserted that the intensity of the action of the infective fluid is intimately related to the number and the activity of the microzymes which it contained. In very infective fluids the extremely minute single rods of the Bacterium vibrio were found; while in the fluids of more protracted inflammations, and particularly in the contents of infective abscess which had existed for comparatively long periods, the prevailing forms of microzymes were spheroids, dumb-bells, and chains of the Bacterium varicosum.

Although Dr. SANDERSON did not actually state that these organisms are the cause of pyæmic infection, or that they constitute the pyæmic contagion, he declared that there can be no doubt that by their presence in exudative liquid, however that presence is to be accounted for, they modify in a very decided manner both the local and constitutional affections. But to this it has been objected that, although microzymes do exist in the infective fluids of pyæmia, their presence does not afford any explanation of the nature of

the poison and the mode in which it acts. Microzymes exist in abundance in other fluids, and have even been regarded as the exciting causes of tetanus and many other diseases, and cannot therefore be deemed to be the real and essential cause of pyæmic infection.

ABOUT this time last year the Pathological Society was engaged in a debate on Tubercle, which was prolonged over a series of three of the ordinary meetings. This was the first debate of such a kind ever held by the Society; and although it could not be considered as an absolute success, it was yet sufficiently successful to cause the experiment to be repeated. This year the subject chosen was the no less important and interesting subject of Cancer. The discussion has already occupied two evenings, and bids fair to monopolise a third. Apparently, it was not the intention, or even the hope, of the authorities that certain of the knotty points should be set at rest by it; that the much-contested difficulty of classification should be arranged; or that the precise tissue or element from which cancer originates should be settled. But it was with the desire of drawing out the opinions of the leading English pathologists on the subject, perhaps of eliciting some new facts with reference to the pathology of cancer, or something which might serve to strengthen views already held. Further, a discussion such as this gives the opportunity to those who have not the time or the inclination to write, and who are yet well capable of doing so, of expressing themselves in a manner less irksome to them, whilst it enables the Society to collect and make its own what must be considered as a valuable addition to the literature of cancer. Thus far the debate has been a decided success, whether considered merely as a debate or in relation to the material it has produced.

The subject was inaugurated by a most able and carefully-considered paper by Mr. DE MORGAN. The question—"What are the relations of cancer to the organism, whether in its natural or its morbid condition?"—proposed by Mr. DE MORGAN, was followed by a histological definition of the term "cancer"; and the remainder of the paper was occupied in the consideration of whether cancer be of local or constitutional origin, more especially whether it be a blood disease. It will be seen that the author excluded from the term "cancer," sarcoma. It would have been well, perhaps, if the meaning attached to the word "sarcoma" had been expressly stated. For although we find it employed by FÖRSTER only to cover those tumours formerly described by Sir JAMES PAGET as the recurring fibroid and fibro-nucleated, it is used by VIRCHOW and the later German and French pathologists as an inclusive term embracing a vast group of tumours consisting of embryonic connective tissue. The confusion that might arise from such absence of perfect definition will not for the present be apparent, and may therefore be set aside for future consideration. Suffice it to say that the majority of those who have already spoken employed the term "cancer" in its old acceptation for all truly malignant tumours—such as have a tendency to recur *in situ*, to affect the lymphatic glands, and to form deposits in distant organs,—omitting only the recurring fibroid and fibro-nucleated growths.

From this basis the discussion has hitherto resolved itself into an animated debate as to whether cancer be of local or of constitutional origin. Ranged on the side of the belief in a local origin are Mr. DE MORGAN, Mr. SIMON, Mr. HUTCHINSON, Sir WM. GULL, Mr. ARNOTT, and Dr. PAYNE; whilst almost the sole supporter of the constitutional side is Sir JAMES PAGET, well able, nevertheless, to uphold his views even against such an array of opponents.

Strongly as Mr. DE MORGAN appeared to believe in the local origin of cancer, he was obliged to confess that "there are strong grounds for regarding cancer as something more than a local disease"—such grounds amongst others as its hereditability, its almost certain recurrence. After still further allowing that "there is in some, perhaps in all cases, a predisposition to the disease," he proceeded to employ his whole vigour against the theory of cancer being a blood disease. The main arguments employed may be thus shortly summed up:—The good health of patients in the early stages of the disease; the fact that a cancer removed rarely recurs in one of the ordinary seats of election (breast, uterus, &c.); that repair usually takes place perfectly well in cancerous patients; that the infection of distant parts may be explained by what we now know of the "independent action of cells"; the occasional long periods after removal before relapse takes place; the occasional retrogression of cancer; and the greater liability of women to it. Besides which there were certain similarities between cancers and other tumours which could only be explained by allowing for the latter a similar blood origin—as, for instance, their occasional hereditary nature and recurrence after removal.

The views of the paper were supported by Mr. SIMON, and with still greater warmth by Mr. HUTCHINSON. It must be confessed that the opinions of the latter were not strengthened by very strong arguments. That cancer often originates in the form of a small wart or ulcer is an undoubted fact. That such a wart or ulcer, if neglected or fostered, will be still more likely to develop into a cancer is just as certain. But it is not at all certain that a wart or ulcer can be developed into a cancer in every or any individual. That such development has often occurred does not by any means shut out the possibility or probability of a predisposition in the person affected. Least certain of all is it that many cases of such a kind, "if treated on the theory of the local origin of cancer at an early stage, might have been satisfactorily cured."

Mr. SIMON perhaps took the broadest view of the subject when he suggested that cancer should be considered in its analogies with other diseases—with syphilis and tubercle—diseases which appeared to have an undoubted local origin. Nor was he appalled when such analogies led him suddenly on to the possibility of the inoculation of cancer. He stopped short here, however, and most emphatically stated that he was "a long way from saying that." Strangely enough, Sir JAMES PAGET employed the analogies between these same diseases and cancer to strengthen his doctrine in the latter being a blood disease. In a speech remarkable for its eloquence and clearness, he set forth most powerfully the arguments for a constitutional origin of cancer. Not only was its hereditary appearance suggestive of this, but still more the peculiar manner in which it was inherited.

The mother might be the subject of cancer of the breast; the daughter, of cancer of the uterus; and one or more members of the third generation might develop cancer in totally different organs.

And now appeared one of the great facts of the discussion. Referring to the ratio of cases in which hereditary tendency can be traced, "When I was engaged almost solely in hospital practice," said the great pathologist, "I thought it was about one in six. When I came to know something more of private practice I found I could count one in four. Now I can without difficulty count, as actual facts, not less than one in three of all patients with cancer in whose families the occurrence of cancer is well known." Mr. DE MORGAN had stated in his opening address a belief "that cancer is more frequently inherited than is generally admitted." But probably he had scarcely expected so speedy and decided a confirmation of his belief. Mr. ARNOTT, who spoke next, appeared to be completely unsettled by it, and was obliged to confess himself shaken, if not convinced. To the frequency and peculiarity of hereditariness Sir JAMES PAGET added the almost absolute certainty of recurrence after removal as a second weighty reason for acknowledging that cancer is constitutional, comparing it in this relation with other tumours. That cancer is a blood disease was not nearly so strongly insisted on. It appeared more probable that the blood was the seat of the disease than any of the all-pervading tissues, the nervous system, connective, organic muscular fibre, &c. Again, cancer bears certain marked analogies with other diseases which we are in the habit of considering blood diseases—as syphilis, gout, scrofulosis, &c. Here, however, the argument is visibly lacking in strength. That a disease is probably a blood disease because it is like other so-called blood diseases may be held to be just as much an argument that these so-called blood diseases are not really such. It may be that each of them consists, as VIRCHOW believes of one of them—scrofulosis,—in "grössere Vulnerabilität der Theile und grössere Pertinacität der Störung," either inherited or acquired. The fact of cancer being more often met with in women than in men was thus explained: that the disease is essentially one of degeneration; and that the parts most frequently affected—the uterus and breast—were those in which degeneration was most marked.

To Sir JAMES PAGET belonged so undoubtedly the honours of the second evening that, after his, the other speeches fell somewhat flat. Yet Dr. PAYNE perhaps struck the root of the matter when he said that what was wanted was a clearer understanding of the terms employed.

For, after all, the whole question of the debate has thus far hinged upon the meaning to be applied to the words "constitutional" and "local." Upon the greater or less value given to each of these everything must depend. If we allow a *locus resistentiæ minoris* to be inherited by the child from the parent, we are surely allowing a constitutional predisposition, no matter whether that weak point be situated in the blood or only in part of a single tissue. Such a predisposition is *all-pervading* in the sense that it has existed throughout the life of the individual; and the new growth which arises must be considered to be an evidence of that constitutional predisposition. On the other hand, no one, however much he may be imbued with a belief in the constitutional theory, holds that each and every part of the individual is alike and equally liable to be the seat of cancer, however strongly that individual may be the subject of a constitutional predisposition. That cancer has certain seats of election is allowed by all. That it requires a certain local stimulus for its production is held by both sides, for it is distinctly stated by the supporters of the constitutional origin to be a disease of degeneracy.

Setting aside, then, the question of cancer being a blood disease, vigorously attacked by the one side and much less warmly defended by the other, the difference between the two sides up to this point seems to be only one of degree. If it had been possible that a thoroughly clear understanding of the meaning to be attached to certain terms could have been come to before the discussion commenced, it might have been discovered that even that amount of difference did not exist.

AMONG the many salutary measures brought before the late Parliament only to be shelved on the plea of "careful consideration," Mr. DALRYMPLE'S Bill for the treatment of dipsomaniacs holds a prominent place. If, as the Attorney-General hinted the other day, sanitary reform is about to appear in the political foreground, that Bill, we hope, will receive the attention it merits. Our only fear is that, allied as the Government is with the publican interest, the misrepresentations with which the Bill and its promoters have had to contend may be renewed. The old plausible arguments against infringing the freedom of the subject may be pressed once more into service, and the promoters of the *status quo* will be heard to say that the moment you interfere with private vice, on the ground of its ruining its victim and his belongings, you must legislate, not against drunkenness only, but against high play, reckless speculation, and so forth, till the repeal of the good old British right of "going to the devil in one's own way" becomes complete.

Without reopening this complicated question, it may be well to point out that if Mr. DALRYMPLE'S Bill legalised the right of the dipsomaniac to voluntary "asylum"-restraint, it would prove a blessing to many and a grievance to none. But such was not Mr. DALRYMPLE'S intention—at least, as his opponents in the lay press understand it. The asylum in which he proposed to treat the dipsomaniac was not a lunatic one. His Bill was framed in strict accordance with the recommendations of the Select Committee of the House of Commons of 1872 on Habitual Drunkards. By its various clauses he makes special provision that all the arrangements necessary for the care and, if possible, the cure of dipsomaniacs should be carried out "independently of, and distinct from, a Lunacy Law, Commissioners in Lunacy, or Lunatic Asylums." These clauses, we may add, were all conceived and worded so as to place every possible check on any undue interference with what might reasonably be regarded as the liberty of the subject. Not a suggestion, in short, of the Select Committee was left unadopted in the Bill, a fact which renders all the more inexcusable the inaction of the Government in taking it up—inaction which told heavily on its author's health, already impaired by family affliction, and

ultimately brought him to the grave. It is due to the memory of a sanitary reformer so enlightened and zealous as Mr. DALRYMPLE that his Bill, or some judicious modification of it, should again be brought before Parliament—committed as are the leaders of that Parliament to make the public health in its widest signification their especial care.

But while no effort should be spared to forward the enactment of some such measure as that contemplated by Mr. DALRYMPLE and approved by the Select Committee of the House of Commons, let us not relax in so extending the area of preventive medicine as to take in this greatest of moral maladies. Drunkenness has acquired the dimensions of a national vice and a national curse, and a crusade for its suppression is, we are glad to see, on foot. Not our own profession only, but that of the Church, is enlisting itself in the good cause; and while we have Sir HENRY THOMPSON addressing the Students' Total Abstinence Union on the physiological grounds for abstention from alcoholic liquors, we have the Archbishop of WESTMINSTER and the Bishop of SALFORD eloquently appealing from the pulpit for co-operation towards the same end. It strikes us, however, that Sir HENRY'S *modus operandi*, identical as it is with that recommended by the Scottish Commissioners in Lunacy, is the more practical, and therefore the more likely to be crowned with success. The fostering of the religious sentiment with the self-restraint it imposes is most laudable in its way; but something more is required ere weak, irresolute human nature is adequately prepared to resist the temptations of the flesh. Educate the people; educate them so as not merely to add to their resources of intellectual or refined enjoyment, but to possess such knowledge of the bodily frame and its functions as will make them the intelligent custodians of their own health. This latter is the primary condition of the successful weaning of the working man from vicious indulgence of every kind; and it is, as Sir HENRY THOMPSON justly remarked to his hearers, "because you and I and our fathers and forefathers have failed so to educate him that we see him as he is." First, then, let an enlightened educational system extend to the humblest citizen in the land that knowledge of self, in its physical no less than in its moral aspects, which the ancient adage revered as a gift from Heaven. From the respect thus acquired for the body and its functions will spring not only habits of temperance, cleanliness, and tidiness in the individual, but a standard of general purity, physical and moral, which, with the force of collective public opinion, will insist on well-aired houses, on unpolluted water and unadulterated food, and the thousand-and-one requisites of healthy life the neglect of which is visited on its perpetrators in the countless forms of disease, domestic misery, and destitution. The attraction to the ale-house and the gin-palace will thus be neutralised at its source—the uncomfortable home; while the provision of that recreation, whether literary, artistic, or spectacular, on which Sir HENRY THOMPSON so eloquently insists, will come in to improve the advantage thus gained, and to engender in our sons of toil tastes and pleasures the indulgence of which leaves no reaction but that of good. We have waited long for the appropriate and efficacious remedy for intemperance and its consequences. We have exhausted measures penal, persuasive, minatory, religious; but in vain. In education—education in the old Greek sense of respecting the body as well as the mind, and of making the knowledge and culture of both develop hand in hand—lies the one and only way to the desired end. And the measure will be all the more effective because it appeals to the self-respect of the people. Treating them not as children or weaklings, it raises them to the full appreciation of their wonderfully constituted frames, and inspires a just, honourable, even chivalric pride in preserving and improving the gifts vouchsafed them—of guarding, in a word, against all vicious indulgence as a disloyalty to the sacred trust committed to them here below.

IT will be seen in another column that the course of the Irish Conjoint Scheme is not quite so unchequered as that of the English one, which may be expected to be in working order in the course of the present year. Our readers know pretty well the position of this difficult and complicated question in Ireland. The chief features of the Irish Scheme were discussed by us in the course of last year. And the Scheme, with trifling alterations, received the sanction of the General Medical Council, which body, indeed, was loud in its praise of that portion of the Scheme which provided that all medical students be required to pass a somewhat heavy examination in Arts previous to entering upon their professional studies, and that the appointment of examiners in Arts should be entrusted to the universities co-operating in the Scheme. The participating bodies were the University of Dublin, the King and Queen's College of Physicians, the Royal College of Surgeons, and the Apothecaries' Hall. As our readers know, one important body in Ireland, the Queen's University, which gives sixty or seventy degrees in the year, held aloof and did not fall into the Scheme. Since the Scheme was sanctioned, the co-operating bodies have, through their representatives constituting the Committee of Reference, been laudably trying to agree on details. The great co-operating bodies agree. As usual, difficulties arise in connexion with the least important body. The Irish Apothecaries' Company is creating difficulties. It is so jealous for the interests of pharmacy and the allied sciences that it refuses to give its diploma to the student who passes the Conjoint Board—as the two consenting Colleges agree to give theirs—unless he shall pass an additional and special examination of the Company. This is a fine pass indeed. But we should recommend the other authorities to disregard it, as, after getting the double qualification of the two Colleges, clearly no one would care about that of the Hall.

But a much more serious difficulty has arisen. The fellows of the College of Surgeons in Ireland, in special meeting assembled, have, as will be seen in another part of our impression to-day, objected to the Scheme. A resolution was proposed deprecating *any* scheme of conjoint examination as being likely to prove injurious to the interests of the public and of the profession. And this resolution was not without important support. But, finally, an amendment was passed by a large majority objecting to the *present* Scheme. About fifty fellows voted for this amendment. It is clear, therefore, that the Council

of the College of Surgeons is in a painful position. Naturally, it feels honourably committed to the Conjoint Scheme, even if it loses by it. On the other hand, a large section of its own fellows have very decidedly expressed their disapproval of the Scheme.

We cannot too much admire the desire of the College of Surgeons to settle this question. We would urge upon the fellows to reconsider their attitude of opposition, and to ask themselves whether—with an impending arrangement for England, by which, with an easier preliminary examination and a charge for the diploma of the two English Colleges of thirty guineas—the interest of the Irish Colleges will be furthered by indefinitely postponing a conjoint arrangement for Ireland. Will Irish students be likely to pay forty guineas for two Irish diplomas separately when they can get the two English ones conjointly on easier terms for thirty?

It is known that we do not see our way to believing that any Conjoint Schemes that have been yet produced will satisfactorily dispose of this great question of a complete examination for the general practitioners of this kingdom. But it seems that some such Conjoint Schemes will have to be tried before anything more sensible and more satisfactory is substituted. And we think it alike imprudent and impolitic to raise objections to Schemes which are the best that the existing bodies can produce, upon which they have expended great labour, and to a trial of which they are honourably committed.

Medical Annotations.

"Ne quid nimis."

OUT-PATIENT REFORM.

As far as they go, the results of the year's work of the Hospital Out-Patient Reform Association are interesting. The information which the Association has to give amounts to this, that in eleven of thirteen hospitals there is a rule that no unqualified students should be permitted to prescribe for patients; that a lay officer is instructed to ascertain the fitness of patients for hospital relief in the following nine hospitals — St. Mary's, Hospital for Consumption at Brompton, Royal London Ophthalmic, Samaritan Free, St. Peter's, Great Ormond-street, Vincent-square, Newman-street, and Lock Hospitals; that eight hospitals absolutely, and with emphasis, rejected the proposal of the Out-patient Reform Association that medicine should not be given gratuitously, while five—St. Peter's, Soho-square, Newman-street, Victoria, and Lock Hospitals—stated that medicine was paid for by the patients. Though this information is interesting, it is not much to show for a whole year's work, and it must be confessed that the Association is either languid or somewhat unsuccessful in securing the co-operation of the hospitals and of general practitioners. Only thirteen hospitals replied in detail to the inquiries of the Association, and there was confessedly a conspicuous absence of general practitioners at the meeting. The committee finds satisfaction in pointing to the case of the Moorfields and Westminster Hospitals as places where "earnest efforts are being made to remedy acknowledged evils," and expresses great gratification at the Great Northern Hospital closing its out-patient department. We confess to thinking that for a hospital in the situation of the Great Northern to close its out-patient department is a very questionable procedure, and one which does not raise its claims to public support. It is an utterly untenable doctrine that only uterine and ophthalmic diseases are entitled to out-patient relief. As to the great question of the investigation of *fitness*, the information given us by the committee is disappointing and incomplete, and adds literally nothing to what we knew before. Dr. Rogers did good service in pointing out a very reprehensible error in the reports of hospitals, by which the number of *attendances* was so put as to appear to represent the number of *patients*. Even hospital reformers have been misled by these errors into very fallacious representations. Thus, in the article in the recent number of the *Westminster*, the number of patients attended at the Farringdon Dispensary is given as 27,166. This number, we have ascertained, represents attendances, and must be divided by four to give anything like an accurate representation of the number of patients attended. After this arithmetical operation it would be safe to consider that the patients are not all different individuals, being more or less chronically afflicted people, who renew their letters in the belief that they get good by frequent or continuous treatment. If the Out-patient Reform Association would do a good year's work in the next twelve months, it might very profitably devote itself entirely to a severe scrutiny of all existing statistics on the subject, and an attempt to introduce a new set, based on more severe principles of construction. We are glad that the Association condemned strongly the treatment of Dr. Chapman by the Metropolitan Free Hospital.

THE ASHANTEE SICK AND WOUNDED.

WE have received some intelligence from a correspondent on board the *Victor Emanuel* up to the 7th instant. We learn that this hospital-ship reached Sierra Leone on the evening of March 6th, having left Cape Coast Castle on the 26th ultimo. Before sailing she collected on board all the cases that were in any degree serious from the hospitals on shore and afloat, in exchange for all convalescents and trivial cases fit to accompany their respective corps to England. The *Victor Emanuel* was not only intended to act as the hospital-ship *par excellence* of the expedition, but as a central depôt on which other vessels might draw for provisions, stores, and clothing, and great use was made of her in this way. Warm clothing and medical comforts were supplied to batches of invalids and ships conveying troops homeward, and a considerable quantity of ice was distributed to other steamers for the use of the sick on board. By far the most unpromising cases have been those of dysentery. The beneficial effects of change of climate, traceable enough in the majority of the invalids, and especially in those who had suffered from fever, were less evident in those suffering from dysentery, and, of six deaths that took place on the voyage between Cape Coast and Sierra Leone, all but one were attributable to this disease. It is with extreme regret that we have learnt of the death of Major Baird, of the 42nd Highlanders, on board the *Victor Emanuel*, shortly after her arrival at Sierra Leone. This officer, whose death, it will be remembered, was by some unfortunate accident incorrectly telegraphed to the newspapers as having taken place after the fight at Amoaful, was wounded in the left thigh on that occasion. The wound implicated the profunda artery, and led to the formation of a traumatic aneurism; but it was not from this injury, but from the effects of climatic fever and an old affection of the heart that this very gallant officer lost his life. Major Baird was buried on the 7th March at Sierra Leone, along with a subaltern of the 1st West India Regiment, who died on board an African mail steamer then in port. The *Thames* had left on the previous evening for England, conveying Captain Butler, the author of the "Love Lorn

Land," who was understood to be very ill. We are glad to be assured by our correspondent that the cases generally on board the hospital ship were progressing very favourably towards recovery.

DEATH BY "THE VISITATION OF GOD."

A DISCUSSION has recently taken place between the medical officer of health and the coroner of the town of Whitby, as to the advisability or otherwise of allowing coroners' juries to return the time-honoured verdict of "Death by the visitation of God." It seems that Dr. Taylerson, the medical officer of health, in his report to the rural sanitary authority, pointed out the importance of precision in returning the causes of death, especially in cases which become the subject of judicial inquiry, and concerning which medical testimony is given. Such verdicts as the one in question are, he asserts, of no value, and in support of this assertion, which seems to us self-evident, he has since quoted a passage from the Registrar-General's Report for 1841, to the following effect:—"To the question, 'What is the cause of death?' such verdicts as Natural death or Visitation of God, it is scarcely necessary to say, are no answers at all, but mere evasions of the inquiry."

The coroner, Mr. Buchanan, has taken offence at the observations of Dr. Taylerson, and at an inquest which he lately held, took occasion to make in his address to the jury the following among other remarks:—"The jury were not to be deterred from returning what appeared to him the only proper verdict in a case like this—viz., 'Died by the visitation of God'—if such was their opinion. He was happy to say he had not yet outlived his belief in God, and he hoped it would be long before an English jury could be found that had done so." He then characterised Dr. Taylerson's remarks as "impertinent," and continued: "The verdict 'Natural causes' might be sufficient for a jury of semi-infidels—such a jury he hoped he should never have to address,—but the law of the land recognised 'The visitation of God' as a proper verdict in certain cases, desirable as it might be that the exact cause of death should be known. . . . . He considered it a piece of impertinence for any medical man to make such remarks upon the verdicts of juries, and especially so when the inquiries were held by an experienced coroner and a lawyer of long standing. It would never do to allow individual medical men to set up their *ipse dixit* against the law of the land. . . . . To such medical men he would say, 'Mind your own business.'"

The inquest at which these remarks were made was held upon the body of a child named Minna Simey, three months old, who had, according to its mother, "been a very healthy child, and never had a doctor. It was teething, and was very uneasy with its mouth." It was alive and well at 12 o'clock on Saturday night, when its mother gave it the breast. The mother slept with it on her right arm, and awoke at 6 in the morning and found it stiff and dead. It had been frothing at the mouth, was black about the eyes, and its hands were clenched. Another woman was called who had seen the dead child, and gave it as her opinion that "it had all the appearance of having died in a fit." According to the *Whitby Gazette*, from which we take our report, there was neither medical evidence nor post-mortem. Verdict: "Died by the visitation of God of convulsion fits."

If the case be rightly reported, it seems odd that the coroner should not have commented on the strange fact that a child of three months old had already commenced teething. The commencement of teething is seldom earlier than the seventh month of existence, but is often delayed. Secondly, there seems to us no evidence at all that the child really did die of convulsions, for nobody actually saw the convulsions, and the post-mortem appearances were certainly such as are met with in death from other causes. Thirdly, there was no evidence, supposing the child to have died of convulsions, as to how the convulsions were caused. Convulsions do not occur in a healthy child, and one of the most common causes of convulsions, teething, did not probably exist in the child in question.

"Death by the visitation of God" is a verdict which ought not to be allowed. If it is advisable to refer every event immediately to its prime cause, without reference to the connecting links, then coroner's inquests are of little use; for since every death is clearly to be looked upon as a visitation of God, no matter how the Almighty may think fit in His infinite wisdom to make manifest His visitation, it is clearly an act of impertinence, not to say blasphemy, on our part to pry into His inscrutable ways. The railway accident, the explosion in the coal mine, the poisonous draught, the over-lying in bed (whereby many children meet their death) Mrs. Manning, Rush, Greenacre, and William Palmer are all merely instruments whereby the visitation of God is brought about; and why should we attempt to interfere with God's will, or bring His instruments to justice? If the formula "Visitation of God" is to be retained, let it be used as a matter of course in all cases, and let coroners and their juries clearly understand that their duty lies solely with the proximate, and not the remote cause. Coroners' juries are man's invention, and their verdicts, being designed for man's instruction and future guidance, should, if possible, contain some statements which are comprehensible to our understanding, and therefore the less they have to do with the inscrutable and the unseen the better. If post-mortem examinations be made by properly skilled persons a failure to find a proximate cause of death will very rarely take place, and, in our judgment, no coroner should leave a stone unturned for the discovery of the same.

SIR JAMES PAGET AND ANTI-VACCINATION.

A VERY wrong use is made of an extract from Sir James Paget's Lectures on Inflammation by the ladies who constitute what is called "The Mother's Anti-Compulsory Vaccination League." The following are the chief words of the extract from Sir James's lecture which is put into pamphlet or tract form, and has been forwarded to us by a valued correspondent to whose wife a copy had been sent:

"The progress of the vaccine or variolous infection of the blood shows us that *a permanent morbid condition of that fluid is established* by the action of these specific poisons on it; and although this condition may, so far, at least, as it protects the individual from any further attack of the *same disease*, be regarded as exercising a beneficial influence upon the economy, yet it is not the less to be looked upon as a *morbid state*."

The italics, we need not say, are the ladies'. They argue that it never could have been intended by the Creator that a permanent morbid condition should be inflicted upon any human being. It is characteristic of a weak argument to talk glibly about the "Creator's intention." It is better to talk about facts. And it is especially well to use an author's words fairly and in the sense intended by him. Sir James Paget would tell these ladies, were they to ask him, that they had by their italics misrepresented his opinion of the beneficence of vaccination. Sir James indicates that the influence of vaccination, though in itself a morbid process, is beneficial; in other words, that vaccination is the least of two evils between which we must practically choose—a duty which society discharges pretty sensibly in spite of anti-vaccination nonsense. According to the views of these ladies, it is the intention of the Creator that men should have small-pox—a much more serious "morbid condition" than vaccination. This thought seems to us much nearer being "blasphemous" than the approval of vaccination,

which so shocks the ladies. Forty or fifty per cent. of unvaccinated sufferers from small-pox die. Nobody dies from vaccination against which these ladies rave so foolishly. It is disheartening to see ladies of some pretensions to intelligence so misusing any influence they may have as these ladies do. We have long ceased to argue with anti-vaccinators, but Sir James Paget's name and fame are so adroitly misused here that we have departed from our custom, but not with any hope of influencing the "permanent morbid condition" of the enemies of vaccination.

SIR GARNET WOLSELEY.

THOSE that have followed—and who has not—the course of events during the late expedition to Coomassie, will recall the time when the state of Sir Garnet Wolseley's health gave rise to much misgiving, if not anxiety. The General suffered from high fever, accompanied by headache and sleeplessness. Happily these symptoms yielded in the course of a few days, leaving the patient, however, considerably debilitated. Still, time was given for his rest and recovery during the short period of inaction that preceded the arrival of the European troops; and Sir Garnet was able, as everyone knows, to take the field and undergo the exposure of the campaign without any recurrence of his attack. During the march to Coomassie, besides being exposed to the sun and miasms of the swamps and bush, the General was subjected to the drenching of a tropical down-pour; but he maintained his health so well that when he reached Cape Coast Castle, on the 19th of February, his condition was probably superior and certainly equal to that of any officer on his staff. The constant movement, the excitement and responsibility of the campaign, had the effect of screwing up the nervous system to the requisite degree of tension, as it were; and Sir Garnet certainly does not strike us as looking worse than when he left on his mission to the Gold Coast. But a state of tension, even though it be unrecognised, cannot be maintained for ever; and he does wisely in seeking the rest and quietude of which he stands in need on the other side of the Channel, where he will not be required to undertake a campaign of dinners, which might prove more trying to his health than that through which he has so successfully passed. The selected officers who accompanied the General worked very hard and at high pressure, and this was not calculated to last long in such a climate as that of the Gold Coast. It must, therefore, have been a source of extreme satisfaction to him and them when they were fairly embarked and on their way northwards.

LONDON AND COUNTRY HOSPITALS.

WE understand that the benevolent Baroness Burdett Coutts visited the International College, at Spring Grove, Hounslow, with a view to its purchase for a convalescent hospital, for which, as far as a magnificent site is concerned, it seems admirably adapted. The College for International Education was opened by H.R.H. the Prince of Wales a few years ago, but has fallen on evil times. The recent Continental disturbances, among other causes, have latterly led to its not being the success that was anticipated, and it is understood that not only are the shareholders willing to dispose of the building, but that, as we have said, there is a probability of its being purchased by the Baroness Coutts.

The College stands on a hill—as high as that on which the Star and Garter at Richmond, which it faces, is situated—forming the narrow and northern boundary of the valley of the Thames, at Spring-grove, Hounslow. Its site is a light, loamy soil, with a subsoil of deep gravel, and it is perfectly drained. The College plateau of playgrounds is within a few minutes' walk of a finely timbered park—Asterly Park—and the institution is within half an hour of London by Paddington and Waterloo. The company went to very great expense in the erection of this building, which would, we imagine, require few structural alterations to adapt it to the purposes of a hospital or sanatorium. All the building is heated with hot water, there are plenty of baths, and the kitchens are good and furnished with all modern appliances. We cannot help thinking that the acquisition of such an establishment would prove highly useful as an auxiliary hospital to some of our metropolitan institutions. No one can entertain a doubt, we imagine, as to the expediency of transmitting cases from the air of a London hospital ward to an institution so salubriously placed and accessible to town as the International College. Such a building in connexion with a London hospital, to which convalescents and surgical cases could be forwarded for the periodical relief of the parent institution, could not fail to prove of much practical advantage, and we commend the scheme as one well worthy of the consideration of philanthropists.

VULPIAN ON THE NERVES TO THE IRIS.

THE dilator muscle of the iris is, it is well known, under the influence of the sympathetic nerve. It has been hitherto believed that all its fibres are derived from the superior cervical ganglion of the sympathetic. Some recent observations of M. Vulpian, which he describes in the last number of the *Archives de Physiologie* prove that we cannot regard this ganglion as their exclusive source. Experimenting upon dogs, he has removed altogether the cervical ganglion and adjacent part of the sympathetic trunk. Ten or twelve days afterwards, the animals having been put under the influence of curara until the motor nerves to the limbs had lost all their excitability, he applied strong-induced electrical currents to the skin of various parts of the body. Uniformly there resulted a slight, but distinct, reflex dilatation of the pupil on the side on which the sympathetic had been removed. Hence he concludes that some nerve filaments must reach the radiating muscle of the iris by some other path. Whether, as M. Aug. Voisin suggests, they pass up along the vertebral artery, or whether they are derived from the cranial nerves, is a question which remains to be decided.

INFANTICIDE.

A BILL to amend the law relating to infanticide has just been submitted to Parliament. Its main provisions are, the making punishable by penal servitude the wounding of a new-born child and causing its death; while proof of the child's being completely born will, for purposes of conviction, be unnecessary. Indictment for murder or manslaughter shall not be precluded; and indictment for felony under the Act shall be valid, although the facts may amount to murder or manslaughter. The protection of infant life, indeed, is a large question, which calls for the institution among ourselves of such societies as have long been at work in France. In that country the death-rate among illegitimate children was recently stated as one out of seven—a clear proof of the extent to which infanticide prevails. The recommendations submitted to the French Chamber are worthy the attention of ours for the protection of infant life:—1. Especial surveillance must be exercised, particularly by medical men, on infants from the moment their birth is registered, and on wet nurses. 2. Lists of plain instructions on the upbringing of children are to be disseminated, by every administrative means, among the population. 3. The laws relating to the registering of deaths must be strictly carried out. 4. Local societies for

the protection of childhood, and charitable associations for assisting poor mothers, are to be represented in the official administrative committees of the departments and communes. 5. A special department is to be formed at the Ministry of the Interior, where information touching the education and protection of children shall be centralised. 6. That Ministry shall publish annually a statistical report on the condition of the wet-nurse service, and of the societies for infant protection. 7. Every year a special congress, relating to the interests of childhood, shall be held in each of the principal French departments in succession. The effect of these provisions cannot fail to be of service in France, where infant mortality has reached the dimensions of a national scourge.

THE DISPENSING OF MEDICINES AT CO-OPERATIVE STORES.

THE question has been asked, and it is one that deserves serious consideration, whether the provisions of the Pharmacy Act of 1868 are duly enforced with reference to the sale and dispensing of medicines by co-operative societies. It was the object of that Act not only to prohibit the sale of poisonous drugs by unregistered persons, but to secure to the medical profession and the public the means of having their prescriptions dispensed by educated, examined, and qualified men. The educational arrangements of the Pharmaceutical Society have been in operation for many years, the examinations are, we believe, conducted in a manner calculated to ensure a fair amount of qualification in those who are entitled to registration, and we hear from time to time of the activity of the Society in taking proceedings against unregistered persons for undertaking the responsible duties of dispensers of medicines. But it appears that the proprietors of co-operative stores are allowed to sell and dispense medicines of all sorts without any question as to registration or qualification. We know that some dissatisfaction has been felt on this account, and we think that some explanation is due to those who feel themselves aggrieved. It may, perhaps, be said that qualified assistants are kept at those establishments. But who engages those assistants, and who is responsible for the efficient performance of their work? Ought there not, in cases of that description, to be recognised and registered proprietors who should be responsible for the employment of qualified assistants, and should be themselves qualified to judge, not only of the qualifications of those they employ, but also of the quality of the medicines used, and of the skill and care exercised in dispensing them? If the Pharmacy Act fails to provide the necessary means of protecting the public in these respects, there must be some defect in it that we did not suspect.

DEATH-RATES.

IN a paper read at a recent meeting of the Society of Medical Officers of Health, Dr. Tripe raised some points which ought to have interested a large proportion at least of his *confrères*, and consequently to have provoked a useful debate. The attendance, however, was poor indeed, and it would be a misuse of terms to call the desultory conversation that ensued when Dr. Tripe sat down a discussion. The subject of the paper was "Density of Population and other Causes which affect the Rate of Mortality in the Metropolis." By means of tables exhibited for inspection, it was shown that in the several metropolitan districts the relation between the density of population and the death-rate was so variable as to indicate that the mortality was governed by other elements more potent than that of mere aggregation. One of these elements Dr. Tripe conceived to be the presence of greater or less numbers of the class of domestic servants in a district. Thus in a group of nine districts wherein the proportion of servants was largest the death-rate was lowest, and in another group of nine districts with fewest servants the death-rate was highest. Of course the idea presented here is simply that the number of servants is an index of the wealth or poverty of a neighbourhood, and it is a truism to remark that, all other things being equal, affluence is more favourable to health than straitened circumstances. Without having an opportunity of going quietly over Dr. Tripe's data and results, we should not be prepared to give an opinion on the domestic servant theory as in any case a prime factor in determining the mortality. It strikes us, however, that, owing to the migratory habits of the class, it must be extremely difficult to determine satisfactorily the amount of influence they would exert upon the mortality of an entire year; at any rate, in districts like the West-end of London, which are full of servants at the time of year when the Census is taken, and comparatively emptied of them for some months later on. Moreover, it is curious to note that, according to Dr. Tripe's calculations, St. George's (Hanover-square) district, containing at the Census of 1871 servants amounting to nearly 11 per cent. of the whole population, had an average annual death-rate of 21·3 per 1000, while Hampstead, with nearly 10 per cent. of servants, had a death-rate of only 15·2 per 1000.

The truth of the matter we take to be very much what we have always understood from Dr. Farr's reports—namely, that the death-rate is governed by a relation more or less complex between population, locality, social and climatic influences, and the like. To differentiate these factors so as to be able to see how far and under what circumstances each of them is invariable in its effect, lies in the future of the science of vital statistics.

THE COST OF THE WAR AND THE ADMIRALTY.

THE cost of the Ashantee Expedition is estimated at £900,000. A large portion of this sum has been expended, and well expended, by the Admiralty. Mr. Goschen was able to congratulate himself on the fact that their arrangements were open to no point of criticism, with the single doubtful exception of the case of the *Dromedary*, and he expressed a trust that his successor in office, on the occasion of any expedition of a similar character, might have the same good luck. But Mr. Goschen took occasion to speak in deservedly high terms of the services rendered by Admiral Seymour and Admiral Mends, and this affords us an opportunity of stating what has been expressed by the medical officers in regard to the Admiralty arrangements. The army doctors declare, as we happen to know, that nothing could have exceeded the courtesy and consideration that have been manifested on the part of the Director of Transports to their service during the late expedition. Every suggestion that was put forward met with thorough and prompt consideration, and nothing was neglected that the foresight, good judgment, and experience of the naval authorities could effect to make the expedition a success. Every wish of the medical service, that the time and means at disposal admitted of being carried out, was complied with. To say nothing of the *Victor Emanuel*, which was fitted out with remarkable completeness, considering the limited time taken to do it, the invaliding arrangements, and those necessary to meet such emergencies as the outbreak of yellow fever, and to guard against the difficulties attending the quarantine regulations of other Governments, were fully considered, and, as it is believed, adequately provided for. All our correspondents agree in affirming that these arrangements have been excellent in their design and efficient in

their working; and it is but justice to add, what we have been assured on excellent authority is the case, that whatever the measure of success has been, it is largely attributable to the cordial and able aid of the Admiralty, and especially of Admiral Mends and Captain Brownlow, of the Transport Department.

THE DISCUSSION ON CHOLERA AT THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

AN important discussion on cholera took place at the Medico-Chirurgical Society on Tuesday evening. Dr. Cuningham, the Sanitary Commissioner with the Government of India, read a paper embodying his views on the etiology of cholera. The paper provoked a lively discussion, Sir Wm. Gull, Dr. Fayrer, Deputy Inspector-General Dr. Hardie, Dr. Buchanan, and Mr. Netten Radcliffe taking part in it. The discussion differed from that which occurred at the Epidemiological Society a few weeks back on the same subject. In that discussion, Indian experience was contrasted with the Indian experiences of Dr. Cuningham and his coadjutors. In the discussion of Tuesday night, English experience was contrasted with the same Indian experiences. The one discussion was as full of instruction as the other, but we must postpone any detailed notice of Tuesday night's discussion until next week.

HARVEIAN SOCIETY OF LONDON.

THE difficulty which seemed to threaten the existence of this Society has been happily surmounted. Mr. Harry Lobb, whose whole-column advertisements appear in *The Times*, was until lately a member of the Harveian Society. An "accusation," signed by nine members, was recently lodged with the President (Mr. James R. Lane), requesting that gentleman to call a special meeting at which the expulsion of Mr. Lobb might be proposed. This being done, the three-fourths majority which is necessary for expulsion was not obtained. Thereupon the president, four vice-presidents, treasurer, and other members resigned. A second special meeting was held on Thursday, the 19th inst., to consider the present position of the Society. At that meeting the resignation of Mr. Lobb was tendered, and resolutions were passed *nem. con.*, inviting the members who had resigned to withdraw their resignations and to resume their official positions in the Society. We are informed that those gentlemen have all accepted the invitation, and we congratulate the members on this satisfactory termination of the difficulty. There can be no doubt that the Harveian Society has done good service amongst practitioners at the West-end of town, and it apparently has still a career of steady usefulness before it.

PULLMAN'S RAILWAY CARS.

WE are extremely glad to observe that the Directors of the Midland Railway Company have introduced Mr. Pullman's system of drawing-room and sleeping cars on their line. It is impossible to overestimate the measure of comfort which will accrue to the public by the inauguration of this much-needed reform in railway travelling. The medical profession is peculiarly interested in the innovation. The busy physician or surgeon will now be enabled to get through a mass of correspondence and literary work during his visit to a distant patient, while the invalid can be moved with ease from one part of the country to another. A second experimental trip was made from St. Pancras station to Bedford last Saturday, a large number of gentlemen connected with the press taking advantage of the occasion, when the merits of the cars were fully demonstrated and appreciated. Each car is a little over 50 feet in length, and about 8 feet 10 inches in width, and is fitted up luxuriously with all necessary conveniences, such as tables, cushioned chairs, and lavatories, not forgetting that important item—a commissariat arrangement. The temperature of the rooms is regulated by hot-water pipes, while the ventilating arrangements leave nothing to be desired. The oscillation is reduced to *nil* by an ingenious arrangement of springs. It is now easy to understand what a small matter to an American is a journey occupying a week or more in duration, and it shows how far behind our cousins we are in the matter of railways when we consider that a passenger may travel from New York to San Francisco without suffering any deprivation of his ordinary comforts. The sooner Pullman's cars are in use throughout England the better.

LIFE ASSURANCE.

IF candidates for life assurance withhold important facts, it is so evident that they thereby jeopardise their policy that we should have thought all advice upon such a point had been superfluous. In almost all cases of disputed payment of a policy, the cause of dispute lies in the fact that the candidate withheld important facts from the medical referees, a knowledge of which would have caused the immediate rejection of the life or its acceptance only at a higher premium. Payment of a policy has lately been disputed in Sussex upon these grounds. A person named Watson, of Hove, had insured his life for £1000 in the Imperial Union Assurance Company, and in answer to questions he had stated that he had never been ill except with the measles, that he was of regular and temperate habits, and that he had no ordinary medical attendant. The office sought to prove that he was of intemperate habits, and that he had, in the very year the assurance was effected, consulted a medical man for indigestion, the result of intemperance. The post-mortem examination had, it was stated, also revealed evidence of intemperance. The case lasted all day, but ultimately the jury found for the plaintiff.

RADCLIFFE TRAVELLING FELLOWSHIP.

PROFESSORS ACLAND, Rolleston, and Vernon Harcourt have memorialised the electors to the Radcliffe Travelling Fellowship, representing that while the merits of the recent candidates were not only very high, but very evenly balanced, no fund is available whence recognition could be given to those who, though not first in the list, are scarcely inferior to their successful rival. So much industry, ability, and scientific attainment were displayed by two of the candidates on the last examination, that the interval between them and Mr. S. H. West, of Christ Church, to whom the Fellowship has been awarded, was hardly appreciable. Great good, say the examiners, would accrue to the public if grants could, under proper regulations, be given to candidates in an examination of this character, who, although unsuccessful in gaining the first place, have approved themselves of eminent merit and promise. The subject is well worthy the attention of the Lord High Chancellor, the Marquis of Salisbury, the Archbishop of Canterbury, the Bishop of London, and the other electors.

THERAPEUTICS OF THE "HOUR."

OUR contemporary seems to have for its mission the setting forth of the therapeutic virtue of the hypophosphites in phthisis, and of another yet undisclosed remedy of Dr. Churchill's for the whole group of respiratory diseases which play such havoc with the people of these islands. It has another article on these subjects, in which it holds out not only the hope to consumptive patients of healing results from hypophosphites greatly in excess of

any that have been got from cod-liver oil, but the prospect of the prevention of the disease, and, indeed, its ultimate eradication from the list of ills which flesh is heir to. More yet. Dr. Churchill's success in the treatment by the hypophosphites is adduced as a reason for believing in his secret inhalations for the cure of bronchitis, pneumonia, asthma, &c. The medical profession is not slow to adopt cures that are cures indeed. But it soon finds out what medicines are really remedial and what are not. But if our contemporary has nothing more satisfactory to reveal in therapeutics than the remedial efficacy of hypophosphites in phthisis, it had better confine itself to politics. It is not a little misleading to be told that while cod-liver oil only cures 1 per cent. of cases of phthisis, hypophosphites give solid expectation of an eventual victory over the most destructive of all diseases. Many a poor consumptive may be landed in his grave a few years sooner than he otherwise would be if he takes the *Hour* for his physician.

STRANGE ATTEMPT AT SUICIDE.

SUICIDES have been described as "brave cowards," but it is rare to find the elements of cowardice and courage in such combination as in a young man now lying in Middlesex Hospital. It appears that last Saturday this person had decided that life with the conditions under which he held it was not worth having. Accordingly, being somewhat of an inventive turn of mind, he devised an ingenious instrument by which he might speedily destroy himself. This instrument was of a novel character, and consisted of a piece of lead gas-piping, near one end of which a touch-hole had been filed, the breech being closed by a boxwood plug. When the weapon had been thus prepared, the would-be suicide emptied several cartridges into the barrel, and over the powder placed a pistol bullet. Everything being thus completed, the unfortunate man placed the breech of the barrel against the wall and the muzzle on his forehead, lighted a match, and fired the powder at the extemporised touch-hole. The aim was certain and the effects are of a most serious and dangerous nature. On being taken to the hospital, the frontal bone was found extensively fractured and depressed, and the flattened bullet was seen imbedded in the fragments. The surgeon, Mr. George Lawson, who was called to the patient, at once operated and removed the bullet and eight or nine pieces of bone. As a striking illustration of the coolness displayed, it may be stated that the young man, in some letters which he had written during the night of the attempt, explained the reasons which had led him to contemplate the dreadful act, and described his feelings while preparing the suicidal weapon. He moreover stated that the boxwood plug which he placed in the breech was at first too small, and to remedy this he put it in water to soak for several hours, during which time he smoked his pipe and wrote most of the letters.

MEDICAL CHARGES IN RAILWAY CASES.

A SURGEON, in the County Court of Sheffield, has sued a patient for the sum of £30 on account of attendance on him for the consequences of a railway accident. The plaintiff sent in a bill for forty-eight visits at 10*s.* 6*d.* each, and twenty-seven consultations at 5*s.* each. The defendant objected to pay the amount, which he thought exorbitant. His Honour held that in the absence of any special contract the plaintiff was not entitled to recover fees on so high a scale, and gave him the option of a verdict for £15 or of taking his case before a jury. The plaintiff accepted £15, and costs were allowed. We have often maintained the position that it was reasonable to charge a man more as the subject of a railway accident than in his capacity as an ordinary patient, on the ground that his case involved more troublesome questions than an ordinary one. But it is difficult to justify the different charge of two sets of visits to the same patient. There should be some proportion, too, we think, between the damages received by an injured man and his medical bill. And £30 for a medical attendance involving damages of £150 is perhaps a little excessive, especially if, as we read the case, another medical man attended and charged on the same principles.

A FINE FELLOW.

THE doctors have done uncommonly well apparently in the late war, if we may judge from the frequency with which their labours have been mentioned in various despatches. It might seem invidious, where all have probably done their best, and several have been specially commended, to put forward the name of one medical officer in particular; but there is such a concurrence of testimony on all sides to the merits and devotion of Staff-Surgeon Dr. Fegan, R.N., that we cannot avoid congratulating him and the Service to which he belongs on the conspicuous part he has played in the campaign. His unremitting attention, night and day, to the sick and wounded of the Naval Brigade under his medical charge is spoken of as having been beyond praise. The General in command, the Commodore, and Dr. Mackinnon, the principal medical officer of the forces in the field, have combined in extolling Dr. Fegan's devoted and fearless conduct under fire, his admirable arrangements for the succour and welfare of the wounded, and, in fact, his services throughout; and we feel certain the Lords of the Admiralty will not fail to recognise such services in the way they unquestionably deserve.

ANONYMOUS WRITERS TO CORONERS.

WE are glad to notice that Dr. Lankester has given the writers of anonymous letters some discouragement. Since the unfortunate case upon which we have commented, he has received numerous anonymous letters in regard to another gentleman deceased, suggesting exhumation. Instead of complying with their request he instituted inquiries, and found that the deceased had been ill a week, attended by his family attendant, Mr. Rawlish, of Kentish-town, and seen by a physician, and that his death had been duly certified and registered. It is utterly intolerable that the repose of the very grave should be liable to interruption by anonymous busybodies. We hope that Dr. Lankester's action in this case will be such a blow to such writers that henceforth they will devote themselves to pursuits in which they will not need to be ashamed of using their names.

THE ISLINGTON WORKHOUSE.

A SECTION of the guardians have been indulging in very unnecessarily strong language against their medical officer, Mr. Cowen, for putting a puerperal patient with appearances of puerperal mania, and who threatened to destroy her child, into the lunatic ward. It turned out that the woman was not insane, but only destitute and deserted by her paramour. As soon as Mr. Cowen satisfied himself as to her mental state, he removed her to another ward. If sane people, in a state of destitution, will make insane threats, and get very excited over them, they must be thankful if no worse treatment befalls them than to be sent to the workhouse. The guardians by a majority refused to censure either Mr. Cowen or the relieving officer. We hope the majority will take some notice of the behaviour of the master of the workhouse in this case, and make him understand that in future, if he wishes to know the nature of medical cases, he is to get his information from

the resident medical officer, and not from an outsider. It is not every workhouse that can boast of such a painstaking and intelligent officer as Mr. Cowen, and he should be protected by the guardians from such disrespectful conduct as that of the master in this case.

THERAPEUTICS AT THE CLINICAL SOCIETY.

THE Clinical Society does not always in its discussions keep in view the therapeutical objects which entered so largely into the design of the founders. But the case of paralysis detailed by Dr. Buzzard at the meeting on the 13th of March did really revive in one's mind the belief that medicine is something more than morbid anatomy. We refer our readers to the details of the case given in another column. The curative result of the iodide of potassium was simply marvellous, and should be well pondered by practitioners. We have before remarked on the large doses of this medicine which Dr. Buzzard often gives. In this case sixty grains or more were given three times a day. It is noticeable that within twenty-four hours of the commencement of ten-grain doses improvement set in and continued progressively. A little mercury was administered subcutaneously, but the great amendment was in full course of development before its administration.

A BUDGET OF INTERESTING FACTS.

THE Sixteenth Annual Report of the Registrar-General of births, deaths, and marriages in Scotland contains the following interesting facts noticed by the registrars:—During the year, a giant Irishman died at Hawick, who was 7 ft. 8 in. in height, measured 58 inches round the chest, and weighed 22 stone. From the imperfect manner in which the old registers were kept, it is often impossible to procure satisfactory evidence of the ages of those who die at extreme old ages. It is, however, one of the peculiarities of the Scottish race that they use every effort to ascertain the exact age of the deceased, so that, as a general rule, the age at death may be relied on as being correct. During the year 1870 there were 9 males and 17 females whose ages were entered on the Register as being above 100 years of age at death. Of the 9 males, 2 had completed 100 years, 1 was 101 years, 2 were 102 years, 1 was 103 years, 1 was 104 years, 1 was 108 years, and 1 survived to his 110th year. Of the 17 females who died above 100 years, 9 had completed their 100th year, 2 were 101 years of age, 7 were 102 years, 2 were 103 years, 1 was 104 years, 1 was 107 years, 1 was 108 years, 1 was 110 years, and 1 was reported to be in her 115th year of life.

MR. GAMGEE AND THE QUEEN'S HOSPITAL, BIRMINGHAM.

THE following supplementary report is appended to the thirty-third annual report of the committee of management of the Queen's Hospital, Birmingham, just issued:—

"The chairman of the Medical Board, acting under the instructions of his colleagues, begs to add the following observations. The completion of the structural improvements of the hospital, in connexion with the extension movement, appears to the medical officers to offer a fitting opportunity to make mention of the eminent services of their colleague, Mr. Gamgee, in instituting and promoting that movement. Nothing of equal importance has occurred since the first establishment of the institution—nothing of equal value as regards either its salubrity or its convenience. The zeal, the self-sacrifice, the eloquence, the administrative skill brought by their colleague to this great work, were such as to deserve the warmest thanks of all interested in the success of the charity, and especially of those engaged in its medical and surgical labours. The medical officers wish also to place on record their full appreciation of the remarkable services of the same gentleman in setting on foot and bringing to a successful termination the first Hospital Saturday collection in this town. Much is hoped in the future from the benevolent co-operation of the working men of Birmingham in the support of its public charities, and in connexion with this assistance the name of Mr. Gamgee must ever be held in honour.—THOMAS P. HESLOP, M.D., F.R.C.P., Chairman of the Medical Board."

We heartily congratulate Mr. Gamgee on this further evidence of the esteem in which he is held in Birmingham.

QUANTITATIVE ANALYSIS RESPECTING TANNIN.

M. DUMAS showed an apparatus meant for the above purpose at a late meeting of the Academy of Sciences of Paris (March 9th, 1874). It is said to act rapidly, and with great ease. It consists of a glass tube containing an alkaline solution and atmospheric air. The substance which is to be examined, as to the quantity of tannin it contains, is introduced into the tube, the two ends of the latter are closed by means of stop-cocks, and the tube is well shaken. The tannin combines with the oxygen of the air to form a salt with the alkali, and a vacuum takes place in the tube. One of the stop-cocks is then to be opened in some liquid, and in noting the quantity of the latter which is drawn into the tube we can calculate the amount of oxygen which has been absorbed, and, consequently, the quantity of tannin which the substance examined contained. In this way it will be found that the pods of the acacia contain 40 per cent. of tannin, chesnuts 60 per cent., oak-bark 76 per cent., and the yellow catechu 77.

SEWAGE IRRIGATION AT DANTZIC.

THE *Journal Officiel* of Versailles gives a charming account of the sewage irrigation carried out at Dantzic. It would appear that the common outfall sewer of the town, in its course through the dunes to the sea, is so arranged as to admit of portions of the sand valleys being irrigated with the sewage. The results of this irrigation would seem to have surpassed the warmest anticipations. Patches of the arid waste have been converted into veritable oases of verdure, and are now growing freely several varieties of crops. Legumes have been an unqualified success; the cabbages have left all other local growths in the rear; and the crops of mangold-wurzel have proved so successful that it has become a question whether it will not be best to devote the irrigated spots to this growth alone. Dantzic is speculating upon its irrigation-meadows becoming a very profitable investment in the near future. Mr. Baldwin Latham, we believe, sewered Dantzic; the present chief magistrate of the town is said to have inaugurated and carried out successfully the irrigation.

HONOURS AND REWARDS FOR THE ASHANTEE EXPEDITION.

CONSIDERING that by one of the leading members of the Cabinet of the present Conservative Government the late expedition was regarded as having been eminently a "doctors' and engineers' war," we hope to see, now that it has been brought to a successful termination, that the members of both these scientific corps receive their full share of any rewards and distinctions which may be conferred.

TREATMENT OF DIABETES.

DR. KRATSCHMER has recently published a paper on this subject in the *Sitzungs-Berichte der kaiserlichen Akademie zu Wien*, which scientific body, we are glad to see, have determined to issue all physiological and anatomical essays and memoirs upon medical subjects generally in a separate divi-

sion of their reports. Dr. Kratschmer gives the results of a series of researches he has undertaken on the influence of sodium, carbonate and sulphate, and of morphia on the excretion of urea in diabetes. He finds that neither the carbonate nor the sulphate exerts any influence on the excretion of sugar, but he has satisfied himself that in morphia we possess a remedial agent that is not only capable of reducing the excretion of sugar, but also of materially reducing the general tissue-metamorphosis of the body.

DR. T. ORME DUDFIELD read an interesting paper on "London Slaughterhouses" at the meeting of the Society of Medical Officers of Health held last Saturday. Dr. Dudfield advocates the establishment of a sufficient number of abattoirs of moderate size, which would meet the requirements of the trade and the community, and effectually proscribe the slaughter of and traffic in diseased animals. We quite agree with the author of the paper when he states that 1700 private slaughterhouses are absurdly in excess of every legitimate requirement. It is to be hoped that the present Parliament will not forget to deal with this important question.

MR. GEORGE HINDLE, medical officer of health for the Darwen urban sanitary district, in a report of the health of the town just issued, gives evidence of a high mortality directly traceable to defective drainage and other arrangements. Many of the houses are connected with the main sewer by means of untrapped stone or brick soughs, others drain into the nearest brook or stream of water flowing past them, the slop-stones in most cases being generally untrapped. Mr. Hindle places some practical suggestions for improving the sanitary condition of his district before the Local Board of Health.

THE *Scotsman* reports a serious outbreak of typhoid fever at Greenock. Up to the close of last week, twenty-four cases, some of them terminating fatally, had occurred in the most airy and reputedly healthy district of the west end of the town. A fact of significance is that the whole of the cases are comprised within a radius of five hundred yards. The houses in which the disease has appeared are, moreover, said to be among the best ventilated and drained in Greenock. The inquiries of the health authorities would appear to point to infected milk as the cause of the outbreak.

WE have often commented on the recklessness with which opium and its preparations are sold, and the fatal consequences which ensue. Another case in point has just been the subject of a coroner's inquiry at Bury. A child has died from the administration of a mixture which was found by Mr. Charles Estcourt, F.C.S., the public analyst, to contain twice as much opium as Godfrey's cordial. The mixture was made up and sold by an old woman who has been in the business for twenty years! Such cases should be taken up by the police.

THE returns of the Manchester Sanitary Association show an appreciable diminution of disease in the town. Small-pox appears to be extinct, while measles and scarlet fever show signs of abatement. Whooping-cough is slightly increasing. Under the headings of typhoid and typhus five cases were recorded.

DR. WILLIAMS, medical superintendent of Hayward's Heath Lunatic Asylum, has published a return showing the cost of maintaining pauper lunatics in all the county asylums of England and Wales for 1872 and 1873. The average weekly rate of maintenance in the 45 asylums during the latter year was 10s. 3½d.

DR. BERKART requests us to state that he lately injected weak solutions of carbolic acid through the thoracic parietes into the lung in a very bad case of phthisis at the Tottenham Hospital. The effect produced was most striking. In a few minutes after the operation, which is said to be quite painless, the patient was "sitting up in bed comfortably eating an egg." In Germany Koch and Moster have recently published observations on this subject, but Dr. Berkart informs us that he had suggested the idea as far back as 1872.

THE annual rate of mortality last week in London was 25 per 1000. The deaths, amounting in number to 1611, included 64 from measles, 11 from scarlet fever, 61 from whooping-cough, 20 from different forms of fever, 13 from diarrhœa, and 649 from diseases of the respiratory organs and phthisis. Different forms of violence caused 46 deaths. The age of a widow who died in Shafton-road, South Hackney, was returned as one hundred years. During the same period the death-rate of Berlin was 33 per 1000, while in Munich it was as high as 47 per 1000.

WE learn with regret of the sudden death, from apoplexy, of Dr. Joulin, of Paris, which occurred in his consulting-room in the course of conversation with a patient. Dr. Joulin was a professor of midwifery at the School of Medicine, and editor of an obstetric journal to which he had given his name—*Gazette de Joulin*. Outside his professional duties he was well known as a powerful and caustic writer, and had enlivened the pages of most of the important Paris papers, including *Le Figaro*, with his keen pen.

THE captain and officers of H.M.S. *Sultan* entertained Staff-Surgeon Willis at dinner, a few evenings ago, at Portsmouth, on his leaving the ship, to mark their appreciation of his services and the regret they felt at losing him as a messmate. Several complimentary speeches were made, and a most hearty welcome was accorded Staff-Surgeon Brake, Dr. Willis's successor. Dr. Brake was for several years staff-surgeon of H.M.S. *Jumna*, and is one of the most deservedly popular medical officers in the service.

A MORTUARY fitted up with air-tight glass coffins has been erected by the vestry of St. Martin's in the old burying-ground, Drury-lane. The action of the vestry will be greatly appreciated by the medical practitioners residing in the district, who have long laboured under the disadvantage of not possessing a suitable building for the performance of post-mortem examinations. In the new mortuary such examinations can be made with decency and comfort, a result not formerly attainable.

THE St. Pancras vestry have decided to memorialise the Home Secretary, with the view to the introduction of a Bill to amend the Adulteration Act, especially in the application of the penalties recoverable under the Act. The initiative taken in St. Pancras will probably be seconded by many of the other metropolitan vestries. We have frequently pointed out the shortcomings of the Act and the need for its amendment, and trust that the session will not pass without an effort being made to accomplish the rectification of a hastily-constructed measure.

OF the sum subscribed to the Sick and Wounded Fund during the Franco-German War, £80,000 remains unexpended, being invested in the name of the trustees, and laid by against the outbreak of a fresh war. Mr. W. H. Hall, one of the secretaries, suggests that the balance might be appropriately diverted to the relief of the sufferers by the Bengal famine.

DR. J. B. RUSSELL has issued his annual report on the health of the city of Glasgow. In 1872 fever and small-pox were much less prevalent than in the year preceding. Out of a population of 502,990, the deaths were 14,357, and the births 20,913—28·54 deaths and 41 births per 1000. Acute diseases of the lungs were 20·21 per cent., and consumption was 14·32 of the total deaths. Among contagious diseases, whooping-cough caused one-half the deaths. "Artificial conditions," concludes Dr. Russell, "surpass all natural conditions in causing the high death-rate of Glasgow."

WE are sorry to notice that the Board of Guardians of the City of London Union have set their faces against the admission of lady visitors to the workhouse. The Bishop of London took up the cause of the ladies, and pointed out the good work they would be enabled to perform in the sick wards. The guardians, however, plainly intimated that while the chaplain would minister to the spiritual wants of the paupers, the doctor would attend to any bodily ailments.

THE decision of the arbitrators in the case of the Governors of King's College Hospital and the Sisters of St. John's House will not, it appears, be given for at least a month, the meeting of the 27th having been further adjourned. We much regret that it should have been necessary to delay the settlement of this question so long, the case being not only important but urgent.

THE "Mayfair Minstrels" gave a concert at the Dental Hospital on Wednesday evening last, in the large room of the new building, in aid of the funds of the institution. The programme attracted a large and fashionable audience, and the affair, musically and financially, proved a great success.

INCESSANT work in mitigating the horrors of the Bengal famine has seriously impaired the health of Sir William Muir, of the Indian Government. During thirty-six years he has allowed himself only eighteen months' respite, and his late increase of duty has told upon him so severely that he will resign the Civil Service and come home.

MEDICAL charity has lost one of its most munificent representatives in Paris in the person of Mr. Dusgate, well known as the oldest English inhabitant in the French capital. Mr. Dusgate's death is called by the Parisian journals "a calamity to the poor."

MR. RICHARD PARKS, of Kilmacow, county Kilkenny, was found dead in the village at an early hour on Sunday last, with fearful wounds on the head, which leave no doubt that he was murdered. Mr. Parks was medical officer to the Kilmacow and Moonconi Constabulary.

THE Act regulating the employment of children in agricultural pursuits, a Bill for the improvement of labourers' dwellings in Ireland, and also an inquiry into the condition of the metropolitan police-cells, will come before the House of Commons shortly.

WE are authorised to state that there is no truth in the statement made last week by an enterprising contemporary, to the effect that Sir William Fergusson is about to tender his resignation as surgeon to King's College Hospital.

WE regret to state that the internal injuries received by Lord Rossmore in his recent accident are so severe that little or no hope of his lordship's recovery is entertained by his medical advisers.

THE Board of Supervision for Relief of the Poor of Scotland has completed arrangements for the distribution of the twenty-fifth Parliamentary grant of £10,000 in aid of medical relief.

ON Monday next there will be an election of President at the Royal College of Physicians. Notices have been issued for the nomination of fellows.

THE HEALTH OF LIVERPOOL.

DR. TRENCH, medical officer of health for the borough and port of Liverpool, has lately presented to the local sanitary authorities a report of the work done in his department during the past year, and the report in this, as in former cases, includes many interesting and instructive items. During the fifty-two weeks of the year, a total of 18,716 births and 13,042 deaths occurred within the borough, the birth-rate being equal to 37, and the death-rate to 25·8 per 1000 of population. The weekly reports of the Registrar-General show that Liverpool, with a population of 98·9 persons on each acre, has a death-rate of 25·8 per 1000, as compared with London, where the population an acre is 43, and the death-rate 22·2 per 1000; with Manchester having a population an acre of 78·9, and a death-rate of 30 per 1000, and eight other towns; the result being that Liverpool, with the largest population to acreage, is fourth only in the comparative death-rate list. An analysis of the causes of death shows that zymotic diseases caused 2387 deaths (or 18 per cent. of the total mortality), of which typhus and infantile remittent contributed 335, scarlatina 205, measles 340, diarrhœa 906, whooping-cough 152, small-pox 10, and cholera 21 cases; of the last-named, 13 were registered as English cholera, 4 as cholera, and 4 as cholera infantum. Dr. Trench records that "there is reason to believe that the deaths of a female emigrant aged thirty-three years, and of her child aged six months, in the Liverpool Workhouse Hospital on the 3rd and 5th September, were due to the poison of Asiatic cholera. They arrived from the Continent *viâ* Hull, and the mother was taken ill on the journey and removed from the Brunswick station direct to the workhouse hospital." Three deaths from Asiatic cholera occurred on the river, in the French vessel *Rosalie*, from Havre, on the 28th September, the bodies being carried out to sea, and the vessel quarantined and disinfected. Another case, taken by mistake to the Southdown-road Hospital, was that of a man who had arrived from Havre and travelled to Liverpool *viâ* Southampton and London, but not attacked acutely until after arrival at Liverpool. Tubercular diseases caused 1989 deaths, and 11 cases of small-pox and 40 cases of fever occurred among seamen or emigrants.

The account of sanitary work performed shows a total of 154 privies certified for conversion into waterclosets. There are now 1035 registered lodging-houses in the borough, and the Health Committee have, since the passing of the Sanitary Act of 1866, ruled that as far as possible all registered lodging-houses should have a day apartment, and that all houses where single rooms were occupied should be registered as sub-let. Inspectorial visits are paid to the inferior classes of houses both by day and night; 107 informations were laid for breaches of bye-laws, and 187 houses were found dirty, and notices served to clean and limewash. A total of 25 cases of fever occurred in lodging-houses, and were duly reported to the medical officer of health, who at once ordered the removal of the patients and the disinfection of the buildings, so that no case of death in a lodging-house from an infectious disease occurred. A total of 9680 were sub-let under the Sanitary Act of 1866, to which 11,844 visits were paid, with the result of finding 1044 rooms overcrowded. There were 436 rooms, occupied by 631 males and 804 unmarried females, besides having also in these rooms 294 children between the ages of five and thirteen years. Under the provisions of the 27th Section of the Sanitary Act, 1866, the Board of Health have provided mortuaries, and 19 bodies were removed to them during the year by order of the justices, on the certificate of the medical

officer. Under the provisions of the same Act 12 sick persons were removed to hospitals suffering from fever. A total of 33,684 articles were disinfected, and 1377 houses were fumigated. Details are also given as to the seizures effected of unwholesome meat, the slaughter-house returns of cattle killed, sheep-pen and piggery inspections, house-to-house visitations, and cellar examinations. We were somewhat disappointed to find in the report no account of port sanitary matters, but presume that Dr. Trench and his colleague in this section of the work, Mr. Reginald Harrison, have not yet got their fleet into working order.

No critical remarks are made as to the amount or kind of work done during the past year. Dr. Trench arranges his report very simply and very systematically, and on all accounts we recommend both urban and rural medical officers of health to take several leaves out of his book.

THE ARMY ESTIMATES FOR 1874-5.

WE are enabled to extract some points of interest to the Army Medical Service from a copy of the Army Estimates just presented to Parliament for the ensuing official year. In Vote 4, under the head of Medical Establishments and Services, we learn that the estimated expenditure for 1874-75 is £243,200, as against £247,400 of the previous year, showing a decrease of £4200. Under the sub-heads of this vote it appears that there is a decrease of £11,867 for the pay, &c., of the Medical Department; but an increase of £3000 for allowances to private medical practitioners, and of £1450 in the cost of medicines, &c. The total number of officers in the department, exclusive of India, is 558, as against 596 in 1873-74. One notable change that may be included among the gains to the medical service, is the increase of the establishment in the administrative ranks by one extra Surgeon-General for Gibraltar, it is believed in the place of a Deputy Surgeon-General for that station. The total pay of the Medical Department, less the sum to be contributed by the Indian Government towards the pay of additional senior officers, amounts to £205,411, divided between the home establishment (£161,260), and that of the colonies (£44,151). The pay of the Director-General of the whole medical service is £1500 per annum as before. Considering the multifarious and responsible nature of the duties, and the social position which the chief of a department is expected to maintain, the post of Medical Director is about the worst-paid one under Government. The estimated cost of the Military Medical School, Netley, is £7705 for 1874-75. The total cost of the Army Hospital Corps establishment is £40,481.

BIRMINGHAM.

(From our own Correspondent.)

THE Local Government Board have sent one of their inspectors to investigate the condition of the Birmingham Workhouse, and he has confirmed the opinion we have repeatedly expressed as to the insufficient medical attendance on the inmates. He recommends that a fresh infirmary should be erected, and that it should have a separate medical staff altogether, the duties of the surgeon to the workhouse being confined to the general medical supervision of the workhouse proper.

The report of Dr. Robinson, the Officer for Vaccination in Birmingham, shows that out of 4742 births registered, all have been accounted for in the way of vaccination save 15. He also states that, of the applicants for revaccination, 60 per cent. had only one mark, and were evidently very slightly protected against small-pox.

At the annual meeting of the Governors of the General Hospital, the treasurer handed in the last instalment of the proceeds of the Musical Festival, £1077, making in all £6577. This is the largest sum ever realised by the Festival.

The annual report of the Birmingham Sanatorium shows that the increased accommodation and superior advantages of the new building at Blackwell are fully appreciated. Sixty beds were filled regularly during the summer months, and numbers, both of men and women, were frequently waiting for admission.

The Birmingham General Dispensary continues to work successfully. The results of the opening of a branch at Camp Hill have been so satisfactory that the managers are looking out for a site for a new branch at Aston. After paying all expenses of the year, the committee are in the enviable position of having a balance in their favour of nearly a thousand pounds.

In addition to the loss which Queen's College sustains by the resignation of Dr. Russell, Mr. Bracey has decided on relinquishing the chair of Anatomy, and Mr. Swain's death causes a vacancy in the chair of Forensic Medicine. The early death of Mr. A. Dodson, M.B. Lond., has caused a general feeling of regret. No student of recent times has reflected more credit upon Queen's College, and none, had he been spared, would probably have had a brighter career. He was suddenly cut off by acute tuberculosis, while acting as house-surgeon at the Children's Hospital.

A remarkable case of wound of the neck has lately been under treatment at the Queen's Hospital. A boy was stabbed with a clasp knife just below the right ear; great hæmorrhage ensued, which was arrested by perchloride of iron and pressure. After some days arterial bleeding again came on from some deep vessel, and Mr. Jordan tied the common carotid artery. Still the hæmorrhage went on, and after the patient's death it was discovered that the vertebral artery had been wounded at the spot where it passes between the atlas and axis, and that both those bones were denuded of periosteum.

The recent meetings of the Midland Medical Society have been well attended. On the 18th ult. Dr. Savage showed the uterus of a patient who died seven days after delivery. Mr. West exhibited a large nævoid tumour partly removed by the écraseur and partly by enucleation; the manifest advantage of the former method was seen in the absence of hæmorrhage. Mr. Lawson Tait, by means of two experiments on curarized frogs, showed the effect of muscarin, the active principle of amanita muscaria, in diminishing the number and force of the heart's pulsations, and the antagonistic effect of atropia. Mr. West read a paper "On the so-called Hydatid Tumours of the Neck," and Mr. D. C. L. Owen on "A Comparison of the Modern Operations for Cataract." On the 4th inst. Mr. Wilders exhibited a specimen from a case of excision of the tongue; Mr. L. Tait a fœtus delivered by the craniocłast after the failure of the long forceps and turning; Dr. Sawyer, specimens of cretified tubercle; and Mr. Bradley a large piece of the right ramus of jaw which had necrosed after an attack of low fever. Dr. Russell read an able and interesting paper entitled "Cases of Nervous Diseases Interpreted by Galvanism."

Medical News.

APOTHECARIES' HALL. — The following gentleman passed his examination in the Science and Practice of Medicine and received a certificate to practise on March 19th:—

Messiter, Matthew Arden, Repton, Derbyshire.

THE eighteenth anniversary festival of the Hospital for Incurables was held at the London Tavern on Wednesday evening last, under the presidency of Lord George Hamilton, M.P. The institution, which was founded in 1854, has at the present time 151 inmates and 319 pensioners. We are glad to notice subscriptions amounting to £2600 were announced during the evening.

VACCINATION AWARDS.—Dr. R. B. Hocter, medical officer and public vaccinator, first district, Brackley Union, Northamptonshire, and Mr. W. N. Symonds, public vaccinator, Croyland district, Peterborough Union, have received awards from the Local Government Board for the efficient state of vaccination in their respective districts.

BEQUESTS &C. TO MEDICAL CHARITIES.—Mr. T. W. Hill, of Clifton, has bequeathed £5000 to the Royal Infirmary, Bristol, £500 each to the Bristol General Hospital and the Cardiff Infirmary, £200 to the Worcester Infirmary, £100 to the Clifton Dispensary, and £50 to the Hospital for Sick Children, Bristol, and a portion of the residue to be applied to the ward built by him and to the wing attached to the Bristol Royal Infirmary.

BOOKS ETC. RECEIVED.

Dr. Silver: Practical Medicine.
Mr. Bosanquet: A Handbook for Visitors of the Poor in London.
Forms for the Use of Medical Officers of Health.
Alger's Poetry of the Orient.
Dr. Nichols: How to Behave.
Census of the North-West Provinces. 1872.
Leisure Hour. Sunday at Home.

Medical Appointments.

BAKER, C. E., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the New Romney District of the New Romney Union, vice Wood, resigned.

BOUGHTON, J. H., M.R.C.S.E., has been appointed Medical Officer for the Forthampton District of the Tewkesbury Union, vice Penruddocke, deceased.

BRIERLY, Mr. J., has been appointed Public Analyst for Southampton: £40 per annum, and fees.

CARRUTHERS, W., L.R.C.P.Ed., L.F.P. & S. Glas., has been appointed Medical Officer and Public Vaccinator for the Parish of Kirkpatrick-Fleming, Dumfriesshire, and the Combination Poor-house, vice J. Carruthers, L.R.C.S.Ed., deceased.

CLARK, G. B., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Assistant to the Extra Physicians, Royal Hospital for Sick Children, Edinburgh, vice Maccall, whose appointment has expired.

COLE, G. M., M.R.C.S.E., has been appointed Medical Officer for the Workhouse and Alcester District of the Alcester Union, vice Wyman, resigned.

CUMMING, J., M.D., F.R.C.P.Ed., has been appointed an Extra Physician to the Royal Hospital for Sick Children, Edinburgh, vice Dunsmure, appointed an Ordinary Physician.

DAGLISH, R. R., M.R.C.S.E., has been appointed Medical Officer for the Workhouse of the Romney-marsh Union, vice Wood, resigned.

FINLAY, D. W., M.D., has been appointed House-Surgeon to St. Peter's Hospital for Stone &c., vice Smith, whose appointment has expired.

GARMAN, C. E., M.R.C.S.E., has been appointed Medical Officer to the Abbey Mills Pumping Station, Bow.

GARNER, J. F., M.B., C.M., has been appointed Junior House-Surgeon to the Preston and County of Lancaster Royal Infirmary, vice Shaw, appointed Assistant House-Surgeon to the Royal Infirmary, Bristol.

GASS, J. B., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Parochial Medical Officer for Hoddam, Dumfriesshire, vice Young, deceased.

GERVIS, Dr., has been appointed a Physician to the Royal Maternity Charity.

HAINES, A. H., M.R.C.S.E., has been reappointed Medical Officer and Public Vaccinator for the Sutton-bridge District of the Holbeach Union, Lincolnshire.

HAYES, T. C., M.B., M.R.C.P.L., has been appointed Physician for Outpatients of the Evelina Hospital, Southwark-bridge-road.

HEBBLETHWAITE, J. E., M.D., M.R.C.S.E., has been reappointed Medical Officer and Public Vaccinator for the Scrooby District of the East Retford Union.

JONES, P. O., M.R.C.S.E., has been appointed Assistant House-Surgeon to the Bristol General Hospital, vice Elliott, whose period of service has expired.

JONES, R., M.R.C.S.E., has been appointed Medical Officer for the Clunbury and Hopesay District of the Clun Union.

KNOWLES, E., M.R.C.S.E., has been reappointed Medical Officer and Public Vaccinator for No. 5 District of the Chesterton Union, Cambridgeshire.

LANE, E. S., M.D., L.F.P. & S. Glas., has been appointed Medical Officer for the Clun District of the Clun Union.

LANE, J. W., M.D., L.R.C.S.I., has been appointed Medical Officer for the Bishops-Castle No. 2 and Norbury Districts of the Clun Union.

LAWRENCE, G. E., L.R.C.P.L., M.R.C.S.E., has been appointed an Honorary Medical Officer to the Eastern Dispensary, Bath, vice Carter, resigned.

LEMON, H. M., M.D., M.R.C.S.E., has been appointed Medical Officer for the Lydbury District of the Clun Union.

LOW, R. B., M.D., has been appointed Medical Officer to the Workhouse, and Medical Officer and Public Vaccinator for the Helmsley District of the Helmsley Union, Yorkshire, vice Ness, resigned.

MEADOWS, H., M.B., C.M., has been appointed Medical Officer for No. 4 District of the Leicester Union, vice Oliphant.

MORRIS, B. R., M.D., M.R.C.P., has been appointed a Physician to the General Hospital, Nottingham, vice Storer, resigned.

OLIPHANT, J., M.D., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer for No. 3 District of the Leicester Union, vice Pierce, resigned.

OWEN, A. LL., M.B., B.A., M.R.C.S.E., has been appointed Surgeon for Inpatients at the Royal Portsmouth Hospital.

PARKER, R., F.R.C.S. (Demonstrator of Physiology in the Liverpool School of Medicine), has been appointed Pathologist to the Royal Infirmary, vice Banks, appointed Assistant-Surgeon.

PARSONS, G., M.B., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the newly arranged Hawkshead District of the Ulverstone Union.

PURVES, W. L., M.D., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Aural Surgeon to Guy's Hospital, vice Hinton, resigned.

ROPER, Dr. G., has been appointed a Physician to the Royal Maternity Charity.

SAUNDERSON, R., jun., M.D., L.R.C.S.I., has been appointed Medical Officer to the Royal Irish Constabulary, Rhode and Croghanhill, King's County, vice Atkin, deceased.

SHAPLEY, H. T., L.R.C.P.Ed., M.R.C.S.E., has been appointed a House-Surgeon to the London Hospital, vice Drew, appointed House-Surgeon to the North Devon Infirmary, Barnstaple.

SLEIGHTHOLME, J. P., L.R.C.P.L., M.R.C.S.E., has been appointed Surgeon to the 1st North York Artillery Volunteers, vice Locke, resigned.

TIDY, C. M., M.B., has been appointed Public Analyst for the City of London for three months.

WOOD, R. A. H., M.R.C.S.E., L.S.A.L., has been appointed Hon. Assistant-Surgeon to the Ladies' Charity and the Lying-in Hospital, Liverpool.

[In the following list—under the Public Heath Act, 1782—the letters "P.S.D." signify Port Sanitary District, "R.S.D." Rural Sanitary District, and "U.S.D." Urban Sanitary District.]

Districts, and Medical Officers.	*Salary per ann.*	*Area in Acres.*	*Population.*
Alston, R.S.D.—viz.:			
Low Sub-District.—Dr. Railton Gill	£20 }	36000	2627
High ,, Mr. T. Garrett Horder ...	£20 }		3053
Audley, U.S.D.—Dr. Richard Vernon	£30	8527	8929
Biggleswade, R.S.D.—Dr. Charles E. Prior ...	£120	58590	27887
Brecknock, U.S.D. { Mr. John North	£25 }	2614	6845
{ Mr. James Williams ...	£35 }		
Cardiff, P.S.D. }	£50	—	—
Cardiff, U.S.D. } Dr. Henry J. Payne	£200	2165	39675
Cheshunt, U.S.D.—Mr. Edward W. B. Garlike ...	£40	—	7518
Chippenham, R.S.D.—viz.:			
Pewsham Sub-District.—Dr. Henry M. Jay ...	£17	3896	1678
Crumpsall, U.S.D.—Mr. Samuel Buckley	£50	733	—
East Preston, Horsham, Petworth, Steyning, Thakeham, Littlehampton, West Worthing, Worthing, R.S.D.s U.S.D.s Dr. Chas. Kelly...	£900	232000	70000
Plymouth, U.S.D.—Dr. Thomas Littleton	£50	—	70000
Southampton, P.S.D.—Mr. Henry Beneraft ...	—*	—	—
Southampton, U.S.D.—Mr. Henry Osborn	£200	—	53741
Stone, R.S.D.—viz.:			
Eccleshall Sub-district—Mr. C. J. Greatrex...	£20	17012	4836
Stone ,, Mr. Geo. H. Hopkins	£20	17666	9151
Swynnerton ,, Mr. John Hayes ...	£15	17968	2204
Trentham ,, Mr. Robt. Thorburn	£15	14360	8823
Sutton-bridge, U.S.D.—Mr. Alfred H. Haines ...	—†	5360	1526
Tiverton, U.S.D.—Mr. Wm. F. Terry	Fees	17491	10024
Torrington, U.S.D.—Mr. Chas. R. Jones	—‡	3456	3529
Tynemouth, U.S.D. { Dr. John B. Bramwell ...	£50 }	5130	38960
{ Mr. Thomas Stephens ...	£50 }		
Wath-upon-Dearne, U.S.D.—Mr. W. M. Burman	£30	730	2000
Westhampnett, R.S.D.—viz.:			
Manhood Sub-district—Dr. N. E. Cresswell		17455	3507
Singleton ,, Mr. N. B. Turner		17806	1825
Whyke & Boxgrove Sub-dist.—Mr. Bostock	—§	25320	6684
Yapton Sub-district—Mr. John B. Collins		13724	3050
South Bersted ,, Mr. Charles Osborn		3008	3794
Wells, Norfolk, P.S.D. }	—	—	—
Wells, Norfolk, U.S.D. } Mr. Fred. E. Taylor ...	£20	2025	2715
Wisbech, U.S.D.—Mr. George Mason	£40	6429	9362
Wombwell, U.S.D.—Dr. John N. Millar	Not fixed	3951	5900

Births, Marriages, and Deaths.

BIRTHS.

ANDERSON.—On the 16th inst., at Roslea-drive, Dennistoun, Glasgow, the wife of D. H. B. Anderson, M.D., Army Medical Department, of a daughter.

JONES.—On the 13th inst., at Southend, Essex, the wife of G. F. Jones, M.R.C.S.E., of a son.

KIRKPATRICK.—On the 15th inst., at Upper Merrion-street, Dublin, the wife of J. E. Kirkpatrick, M.B., of a daughter.

LOWTHER.—On the 19th inst., at Tanley House, Cartmel, the wife of Richard Lowther, M.D., of a daughter.

POWER.—On the 9th inst., at Cleator, the wife of F. D. Power, M.R.C.S.E., of a daughter.

MARRIAGES.

GOODE—CALVERT.—On the 12th inst., at St. Alkmund's Church, Derby, Henry Goode, M.B., to Emma, daughter of the late Edward Calvert, Esq.

STEWART—CONNERY.—On the 24th inst., at Christ Church, Belfast, James Stewart, B.A., L.R.C.P.Ed. (son of Robt. Stewart, M.D., Medical Superintendent of the Belfast Hospital for Insane), to Matilda, daughter of the late Richard Connery, Esq., of Belfast.

DEATHS.

BROWN.—On the 24th inst., Henry Brown, Surgeon, of Mortlake, aged 77.

DAVIS.—On the 23rd inst., at Ludlow House, Ampthill-square, James Davis, Surgeon, aged 83.

DILLON.—On the journey to Zanzibar with the body of Dr. Livingstone W. E. Dillon, F.R.C.S.I., Staff Surgeon R.N., second in command of the Livingstone Search Expedition.

HUGHES.—On the 15th inst., at Bangor, Robt. Hughes, Assistant-Surgeon, Llanberis Hospital, aged 21.

INGLIS.—On the 21st inst., at Onslow House, Eastbourne, Thomas Inglis M.D., F.R.C.S.E., late of the Indian Army, Bengal Presidency. Friends will please accept this intimation.

LATHAM.—On the 24th inst., at Hackney-road (of erysipelas, four days after the birth of a son, still-born), Emily, the wife of Charles W. Latham, M.R.C.S., L.S.A., Surgeon Tower Hamlets Rifle Brigade.

M'FARLANE.—On the 17th inst. (of exhaustion, consequent on rheumatic fever), John L. H. M'Farlane, M.B., Resident Physician, Royal Infirmary, Edinburgh, youngest son of the late A. C. J. M'Farlane, Surgeon, of Montego Bay, Jamaica.

TOYNE.—On the 16th inst., Henry W. Toyne, L.F.P. & S. Glas., L.M., L.S.A., of Ebor House, Beswick, Manchester.

* £1 1s. per case; but not to exceed 25 guineas each six months.
† 10s. 6d. per case. ‡ £1 1s. per case reported on.
§ Ten per cent. per annum upon their salaries as Poor-law medical officers.

Notes, Short Comments, and Answers to Correspondents.

A SPANISH MILITARY HOSPITAL.

AT Santander the provision for the wounded among the belligerents in the North of Spain is deplorably bad. So many of these were brought from the action before Somorrostro that, but for the patriotism of the municipality, the majority must have perished. It was but little, however, that the municipality could do, having had to fight against the army medical department, which, says a correspondent of the *Hour*, "for reasons readily understood in Spain—surgeons suggest sticking-plaster!—insisted on all hands available for the aid of the sick and wounded being given over to them. All, therefore, that the town authorities could do was to open the Civil Hospital to military patients, and if many of those I saw there come out again, unless heels first, I shall be astonished." On the lower floor lay the worst cases, many of them *in articulo mortis*. Between two of the greatest sufferers was a civilian patient in the last stage of typhoid. The indignant remonstrance of a member of the Municipal Board was received by the doctors with a shrug of the shoulders: "Muy bien," said they, lighting their cigarettes, and passed on. And yet the Spanish soldier, Carlist or Republican, deserves better treatment than this. "A cheerier or more faithful man when well," says the *Hour* correspondent, from an experience of all the armies of Europe, "or a more gentle and thankful patient when sick, cannot be found." The picture ought to accelerate the influx of donations to the Spanish Soldiers' Relief Fund.

PYÆMIA AND HOSPITALISM.

OUR attention has been directed by a correspondent to a subject to which we have ourselves occasionally alluded—viz., the contamination of the air of hospitals arising from the contiguity of dissecting and pathological rooms and dead-houses to the wards of hospitals. The effluvium from these sources is well known, and must, if it gains access to wards occupied by patients with open wounds, act very injuriously. Our correspondent suggests whether it would not be to the advantage of all concerned if dissecting-rooms were placed at a short distance from town. We fear that, with the limited time at the disposal of professors and students, and the amount of work they have to perform, this would be impracticable; but there cannot be a doubt that all such possible sources of air contamination as dissecting-rooms should be removed to a sufficient distance from hospitals as to preclude the possibility of danger to the inmates.

Enquirer.—We are not acquainted with any work of the description alluded to.

Dr. Ramsey's letter on "Sanitary Administration" shall appear next week.

THE WEBB FUND.

THE following contributions have been received by Mr. Augustus Churchill, the Treasurer, to the 26th inst.:—

Rev. J. Russell Stock	...	£3	3	0	Dr. Willoughby Arding	...	£0 10 6
Dr. Wheatley, Oporto	...	5	0	0	Dr. Cockle	...	3 3 0
Mr. C. Bleeck	...	2	2	0	Rev. F. Hildyard ...	...	5 5 0
Mr. Onley Savill-Onley	...	1	1	0	Dr. A. S. Taylor ...	...	3 0 0
Mr. George Meek ...	...	2	0	0	Dr. Andrew Clark ...	...	10 10 0
Dr. Cahill	...	2	2	0	Mr. John Ferard... ...	...	2 2 0
Captain Poland, R.N.	...	2	2	0	Mr. W. H. Cochran ...	...	5 5 0
Mr. C. C. Ferard... ...	...	10	0	0	Dr. J. Russell	...	2 2 0
Mr. R. C. Griffith ...	...	5	0	0	R. L. F....	...	100 0 0
Dr. Beddoe	...	1	1	0	Mrs. Holmes		100 0 0
Dr. Dyce Duckworth...	...	1	1	0	Mr. O. C. Jackson ...	...	26 5 0
Messrs. Yarde and Son	...	5	5	0	Dr. E. T. Watkins ...	...	1 1 0
Dr. D. Fraser	...	2	2	0			330 0 6
Dr. Murchison	...	4	4	0			
Sir H. J. S. Ibbetson, Bart.		10	0	0	Amount previously acknowledged		1478 14 0
Mr. W. H. Domville ...	...	1	1	0			
Dr. Clifford Allbutt ...	...	1	1	0	Total		£1808 14 6
Messrs. Spalding & Hodge .		10	10	0			
A Friend of the Family	...	2	2	0			

ERRATA.—In the list of subscriptions for Feb. 14th, for "Dr. Jeffson," read Dr. Jephson; and for "Mr. E. H. Bradley," read Rev. R. H. A. Bradley.

A DOUBLE QUALIFICATION.

WE have had our attention directed to a curious advertisement that appeared in the *Scotsman* of the 14th instant. The Parochial Board of Kirkcolm, Wigtonshire, advertise for a suitable person to act as medical officer and collector of rates for the parish. We have never heard of a Board requiring a "double qualification" of this nature before; and the positions of medical officer and collector form such a curious combination of duties that we wonder whether the "suitable person" is required to be the educated gentleman implied in the title of medical officer.

Kappa, (Ryde.)—At the recent Congress at Marseilles of the Societies for the Protection of Infant Life, Dr. Jacquème proved that the milk of women produced rickets in young dogs, and that, in turn, the milk of female dogs could cure sickly and rickety infants. These effects were ascribed to the composition of both kinds of milk—that of woman containing, out of 1000 parts, 26·66 of butter, 39·24 of casein and extractive, and 1·38 of salts; while the same quantity of milk in female dogs included 97·20 of butter, 117 of casein and extractive, and 13·50 of salts.

Cedric (Salisbury) is thanked for his communication, which, meritorious in many respects, is not suited for THE LANCET.

THE INSANE IN THE DEPARTMENT OF THE SEINE.

IN 1873 the number of patients admitted was 2476; of these, 1315 were discharged, and 720 died. The gross number of patients treated was 8608. On the 31st of December, 1873, the total for the department of the Seine was 6533. This figure is daily increasing, and now reaches 6700. The authorities contemplate sending many patients into the country—a measure which was formerly pretty common. The expected expenses for the year 1874 are £154,000.

Mr. B. J. Vann.—The Medical Act of 1858 applies to Canada and other colonies (the Channel Islands and the Isle of Man excepted), to this extent, that every person registered under this Act is entitled, according to his qualification, to practise in any part of Her Majesty's dominions, subject, however, to the following qualification contained in an Amending Act (1868):—

"Clause 3.—Every Colonial Legislature shall have full power from time to time to make laws for the purpose of enforcing the registration within its jurisdiction of persons who have been registered under the Medical Act, anything in the said Act to the contrary notwithstanding: provided, however, that any person who has been duly registered under the Medical Act shall be entitled to be registered in any colony, upon payment of the fees (if any) required for such registration, and upon proof, in such manner as the said Colonial Legislature shall direct, of his registration under the said Act."

Dr. Walter Sumpter (Cley-next-the-Sea) is thanked for his graceful epithalamium on the marriage of the Duke and Duchess of Edinburgh; but THE LANCET has no space for the lyric muse.

THE USES OF THE UVULA.

To the Editor of THE LANCET.

SIR,—Some of your readers may remember that in 1869 I initiated in the pages of THE LANCET, and in 1872 revived, an inquiry and correspondence respecting the uses of the uvula, and any disabilities that may have arisen from its shortening or removal. It may be supposed that I have a great regard for that little, incomprehensible organ. Be that as it may, I am perfectly sensible of, and have carefully watched, the mischievous part it plays in many apparently intractable coughs, and I find that in a considerable number of cases which come under my care the maleficent action of the uvula, mechanically considered, is much overlooked by the generality of medical practitioners.

It is no uncommon thing to find a person suffering from harassing cough, his strength enfeebled, spirits depressed, appetite diminished, and body emaciated, whom no remedies have more than slightly relieved, and yet all owing to the local irritation produced by an elongated uvula. I feel perfectly convinced that in many instances it arouses the tubercular diathesis, and leads on to the development of phthisis, if not of other formidable affections. Cases are constantly presenting themselves to me of congestion of the lungs, which is clearly traceable to the exciting agency of this lengthened appendage.

A person will tell you that he has a distressing, barking cough, especially in the morning, much aggravated by E. and N.E. winds, till a little secretion commences in the larynx, and he can "bring up the phlegm," and this may disturb him more or less during the day and night. There is also usually a sensation of there being a something at the back of the throat to be swallowed. This is the prolonged uvula, which may often be seen with its apex lying on the tongue, after the fashion of a foot. I have often witnessed instances of a thin, long uvula being actually drawn up, out of sight as it were, by the action of the muscles in suddenly opening the mouth, and disclosing its longitude only by keeping the depressor on the tongue till the muscles were tired. The soft palate soon becomes flabby, the arches lax, and the fauces red and puffy. Now comes the second stage. The irritation and congestion travel onwards down the windpipe, the mucous membrane of which becomes thickened, and so cushions up the interior of the tube that the volume of air inhaled in natural inspiration is insufficient to inflate the lungs; the bronchial tubes collapse; the pulmonary bloodvessels become gorged, and congestion (our third stage) is established. The breathing becomes affected; the heart joins in the *mêlée*, with throbbings, even occasionally intermitting in its beats. With such unquiet neighbours the digestive system sympathises, with loss of appetite, possibly retching (in a measure attributable to the irritation in the palate &c.), flatulence, constipation, and other symptoms of disturbed digestive functions. The urine throws down a sediment of lithate of ammonia, often clouded with mucus, and altogether there is a general disturbance of the whole system. Nor do the brain and nerves escape. Deficiency of memory, incapability of mental application, dulness of intellect, gloomy forebodings, abhorrence of society, occasional vertigo, restless, dreaming nights, and staggering gait complete the category of doleful consequences arising, in the first place, from an elongated uvula!

The treatment is operative or medicinal, or both conjoined. In December, 1869, you did me the honour to publish an epitome of the declarations I had received from a large number of medical men as regards "any ill-effects that had within their knowledge arisen from operating on the uvula." Their answer was that they had seen none. My own opinion is (and others share that opinion) that the uvula should be *shortened* only to its natural standard, and not be entirely *removed*, except under some very unusual circumstances. I have not operated in a single case to my recollection but the patient has been immediately cognisant that the enemy was gone. The cough is shortly arrested, and the whole train of symptoms that I have enumerated vanish. I think I may state it as a fact that in very few cases is there any pain whatever in snipping off the end of the uvula if skilfully done, and the bleeding rarely exceeds three or four drops. The sensation that "something wants removing" is very general; and a gentleman, now living near Hastings, actually, in a fit of desperation, as his then medical attendant would pay no attention to the uvula, cut it off with his own hands, and was rewarded by the immediate cessation of his cough and concurrent symptoms.

If I can invite my medical brethren to direct their attention more frequently to the injury and misery that may, and too often does, arise from the obtrusion of this abnormal condition of the uvula, I shall be rejoiced.

I am, Sir, yours faithfully,

Hastings, March, 1874. C. B. GARRETT, M.D.

Iatros, (St. Leonard's.)—J. Alexander Schetky, younger brother of John Christian Schetky, teacher of military drawing at Addiscombe, possessed the family turn for art. Having studied medicine at Edinburgh, he entered the army as an assistant-surgeon, served in the Peninsula, and ultimately died in pestilential Sierra Leone. He was an excellent anatomist, and could not only dissect, but pourtray the structures of the human body. The museum of the Royal College of Surgeons of Edinburgh, of which he was a fellow, contains a wonderful specimen of his artistic power. It is a dissection of the head and neck, made as well as painted by himself, and, for fidelity to nature and pictorial effect, is unequalled as an anatomical delineation. He delivered in Edinburgh a course of lectures on Pictorial Anatomy, the manuscript of which, now in the possession of the son of one of his oldest friends, shows how thoroughly he combined the qualities of the anatomist and artist.

British Association.—The French Association for the Advancement of Science held its first meeting in 1872 at Bordeaux, under the presidency of M. Quatrefages, and the proceedings on that occasion are embodied in an illustrated volume just published. It will be followed by the second volume, containing the *comptes rendus* of the meeting held last year at Lyons. The present instalment gives a history of the formation of the Society, a list of the members, and all the communications and discussions at the Bordeaux meeting. It offers a very fair reflex of the scientific progress made in these later years.

Mr. Draper, (Spalding.)—We regret that we cannot now reopen the question.

"CONSULTING THIEVES."

DR. GEORGE HARLEY writes to *The Times* of Tuesday, to caution the public against a "lady," who, after gaining admittance to his dining-room on the pretence of consulting him, robbed him of over £20 worth of plate. The trick is a very old one. It is interesting to learn that the woman is "rather under the middle height, good-looking, about thirty-five years of age, with a lady's voice and manners, and wore a dark seal-skin jacket and a quilted black skirt, with fashionable felt hat."

Enquirer.—We know nothing of the individual referred to.

PYÆMIA IN PRIVATE PRACTICE.

To the Editor of THE LANCET.

SIR,—It will be greatly to be regretted if this interesting and important discussion on pyæmia is not productive of some decisive result in a clinical point of view, and I am quite sure that the profession look forward to its conclusion with the greatest possible interest. It is well that the subject was brought forward by one so eminently qualified as the President of the Clinical Society, and it is to be expected that the views of the several speakers (which have not been entirely in accord) will be subjected by him to a sifting analysis, so that in future we shall not be in doubt as to the diagnosis of pyæmia or scepticæmia, but that in relation to a definite train of signs and symptoms, with due regard to causation and constitution, the one may be distinguished from the other. This discussion has from the first been carried on rather from a surgical than from a medical point of view; but my experience leads me to think that the practice of the physician could reveal many cases of pyæmia occurring in private practice which have taken their origin from some inflammatory foci in special cachexies prone to such degenerative metamorphoses. The object of this communication is to lay before your readers several cases which have presented this especial phase of the disease.

Some years since, when I was the registrar of Charing-cross Hospital, I remember two cases being admitted from the suburbs of London.

The first was a child of five years of age. He had been ill for a fortnight, and when seen by me was much emaciated, and presented the signs of pyæmia. The initial symptoms of the attack were those of articular rheumatism; but, like other cases which have come under my observation, there was an entire absence of the acid smell, and instead of the tongue being furred, it was of a deep-red colour, and, although the joints were swollen, the acute pain was markedly absent. The right leg was œdematous, and in the course of the tibia gave evidence of pent-up pus, which was liberated by a free incision, and the whole of the tibia was found to be necrosed. The limb was almost immediately amputated; but death took place in a few hours. At the post-mortem every joint was found to be full of pus. The inflammatory foci in this case might perhaps have been in the bone, as in osteo-myelitis.

The second case was that of a boy, aged twelve, who was also admitted as suffering from acute rheumatism; but his symptoms were similar to those of the case just narrated. The focus or initial seat of the disease seemed to be in the left shoulder-joint, although the large joints were all more or less swollen. This joint was especially mobile, and gave rise to some doubt as to its actual condition. Death supervened in about five days, and at the post-mortem the joints were found to be full of pus, but the especial joint in question had undergone rapid degeneration; the cartilage and ligaments were removed by ulceration, and the upper part of the bone was in a state of necrosis.

About eight months since a young girl of about thirteen years of age, said to be suffering from acute rheumatism, came under my care. She had been ill for more than a week, and upon admission I felt quite sure that I had a case of acute idiopathic pyæmia to deal with, her symptoms were those so distinctive of this state, although it was rather strange that the joints of the lower limbs were comparatively free. In a few days pus was evidently accumulating in all the joints of the upper extremities, and especially in the course of the left humerus. An incision was made down to the bone, which gave exit to a large quantity of pus. At length openings of sinuses made their appearance around the elbow-joints, and gave evidence of profuse suppuration. These were left alone, and when the patient improved in health I removed the greater part of the necrosed shaft of the left humerus. She is still in the ward, nearly convalescent.

I have now in this asylum three young women, about twenty years of age, each admitted as suffering from articular rheumatism. The symptoms in each case were precisely similar, and, having my doubts as to their origin, I questioned them about the possibility of their having gonorrhœa. This they denied, but afterwards confessed to. In a short time all the conditions of pyæmic poisoning became manifest. They were reduced to death's door, and in each case the focus of the articular inflammation was in the hip-joint. They are now convalescent; but each patient has some deformity arising from thickening about the structures of the hip. These are types of cases which occur now and again in the course of our practice, and I am convinced that in some cases of the so-called acute rheumatism in the young and scrofulous we have purulent deposits in the joints, which, however, terminate favourably without destruction of cartilage.

It will be seen that in these cases the disease originated prior to their admission into hospital, and might be classed with those occurring in private practice.

I have ventured to offer to you these few clinical details of facts without suggesting an idea as to the origin or causation of the septic agency.

Yours truly,

THOMAS S. DOWSE,
Medical Superintendent, Central London Sick Asylum,
March 16th, 1874. Highgate.

To the Editor of THE LANCET.

SIR,—The two following cases of pyæmia in private practice occurred in persons belonging to the working class, and living in cottages such as are ordinarily to be found in a small village in an agricultural district. Both were treated at their own homes, refusing peremptorily to be removed to any hospital, even had such a proceeding been (which under the circumstances I am inclined to doubt) in every way desirable.

A. R——, aged nineteen, a domestic servant, returned home from service in the autumn of 1869, convalescing from an attack of enteric fever. Shortly after her return she was seized with rigors, headache, and feverishness, and in a few days fluctuating swellings appeared on the left forearm, over the left scapula, and in the upper and outer part of the left thigh. The two first-named were emptied antiseptically, and healed without further mischief. The thigh became acutely inflamed, the whole limb being greatly swollen, and the skin hard and brawny. Free suppuration followed, and lasted for about three weeks, when it gradually subsided, and the girl made a fair, though slow recovery. At the time when the thigh was in the worst condition there was a good deal of cough and profuse purulent expectoration.

F. C——, aged sixteen, a tall and strongly-built lad, while pitching a sheaf of wheat to the top of a load during the harvest of 1873 was suddenly seized with acute pain in the lower part of the back and back of the left thigh. He was carried home and kept in bed, and the urgent symptoms gradually subsided, so that in about a month he was able to walk about fairly. During this time nothing was to be made out by manipulation. Soon afterwards he was seized with rigors and feverishness, and a large abscess rapidly formed in the gluteal region, followed by a second in the front of the thigh. At about the same time a troublesome hacking cough set in, soon accompanied with profuse purulent expectoration, and the lad rapidly died from the exhaustion consequent upon the discharge from the three sources. The discharge was extremely offensive, the matter from the abscesses in the back and thigh having the same smell as the expectoration from the lung.

Yours faithfully,
Daventry, Feb. 9th, 1874. B. C. GOWING.

GLASGOW.

Hygiene (Aylesbury.)—The sanitary inspector of Glasgow has issued his Report for the year ending 30th April, 1873. The number of nuisances in the city amounted to 10,213. One hundred and eleven dwellings underground, undersized, and medically certified as unfit for human habitation, were shut up. Cases of epidemics were fewer than in the previous year, being 4081 against 9060.

Teratologist.—A model of the mouth of Julia Pastrana, commonly known as the "Pig-faced Woman," is in the possession, we believe, of Mr. Hepburn, of London. Replicas of the same are now in the Odontological Society of London's collection, and also in that of the Edinburgh Odonto-Chirurgical Society.

Mr. Thos. Johnston, (R.M.S. *Calabria.*)—We have complied with our correspondent's request.

CANNIBALISM.

OUR excellent contemporary, *Nature*, in a review of Schweinfurth's "Heart of Africa," has the following remarks *apropos* of cannibalism. It is gratifying to find that the physical characters of men of science are so uninviting to the savage. They are "lean men, and do not sleep o' nights," and they do not fatten, we suppose, on the "dry bones of science."

"The reward," says our contemporary, "of ignorant ages to the returned traveller was general incredulity. Even in the present day there are ignorant persons who question the existence of cannibalism. Dr. Schweinfurth has arrived fresh from the cannibals of Monbuttoo with human skulls and bones almost warm from the saucepans of the savages. He can even describe the sauces which these gourmands use in their dainty dishes. Mushrooms and capsicums for a 'sauce piquante aux champignons' are the literal civilised adjuncts for a dish off a stewed baby only two days old, whose mother had deserted it. The baby was dying while the preparations for cooking it were already commenced. This is the real truth, and no traveller's joke, as the babies and fond mothers would quickly discover should they visit the tribe of Monbuttoo. It may be asked, 'How did Dr. Schweinfurth escape?' but it must be remembered that the Monbuttoo do not eat men of science, who are generally very lean. A fat missionary, with a family fresh from Exeter Hall, may meet with immediate attention, with the warm but brief Monbuttoo invitation, 'Walk in.'"

REPEAL OF SANITARY RESTRICTIONS IN ITALY.

BY Ministerial decree, free intercourse is now allowed for goods and otherwise between Austro-Hungary and Italy. As the cholera has quite disappeared from the latter country, all the restrictions which were imposed during the prevalence of the disease are completely removed.

THE communication of *Warren Bey* (Cairo) shall be published in an early number.

Mr. T. Davies (Holborn) must consult a surgeon.

Musagetès.—The German seats of learning far outsoar ours in their cultivation of music. Vocal associations exist in every University throughout the Fatherland, and without aid or even encouragement from the academic authorities. Edinburgh is making vigorous efforts to foster a taste for an art which ought to have many attractions for youth, not only in a social, but even in a sanitary point of view. Elocution and singing—the exercise of the vocal organs in fact—have a physiological value not adequately appreciated among us. *Dysphonia clericorum*, it is worth noting, is comparatively rare in Germany!

Mr. W. S. Luff.—The coroner was entitled to give the post-mortem examination to an independent practitioner. But the practitioner in attendance should have been invited to it, and his evidence and that of our correspondent should have been taken.

Student, (Stratford, E.)—Consult the Secretary to the Royal College of Surgeons, Edinburgh, who can supply every information.

Mr. W. W. Newton, (Salisbury.)—In Italy the partial abolition of capital punishment is provided for in the new Penal Code, presented by Vigliani to the Senate. Death is now reserved for four cases, instead of fourteen, as formerly—viz., 1st, parricide; 2nd, premeditated homicide; 3rd, homicide perpetrated to commit or to conceal a robbery; and 4th, attempts against the life of the Sovereign.

A. R. P.—The remuneration of a medical man for taking emigrants out to New Zealand is about 10*s.* 6*d.* for each statute adult.

M.R.C.S. Eng. (a Constant Subscriber acted rightly in the matter.

Mr. Cresswell's paper shall be published.

Beatrice.—It is not customary for one medical man to charge for attending the children of another.

THE lady doctors, whatever views they may entertain of their mission, do not seem averse to matrimony. The London correspondent of the *Manchester Guardian* states that "Miss Elizabeth Morgan, M.D., will shortly be married to Dr. Hoggan." The division-of-labour principle has a fair chance of being exemplified in a favourable light when a doctor marries a doctor.

Bertie.—We never recommend a particular surgeon. Consult any respectable surgeon.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir W. Fergusson, London; Dr. Murchison, London; Mr. Bryant, London; Dr. Rutherford, London; Dr. G. Harley, London; Dr. Ramsey, Cheltenham; Dr. Pierson, Dresden; Mr. West, Birmingham; Dr. Mackenzie, London; Mr. White; Lord Brabazon, Carlton Club; Mr. Symonds, Peterborough; Mr. Gill, Clifton; Mr. Reeves, London; Dr. Murphy, New Orleans; Mr. Voisin, Jersey; Dr. Mackintosh, Chesterfield; Messrs. Pilgeran and Lefevre, London; Dr. Dudfield, London; Dr. B. W. Richardson, London; Mr. Luff, Stockton; Mr. Johnston; Mr. Potter, London; Dr. Ogilvie Will, Aberdeen; Mr. Ellis, Manchester; Dr. Smith, Lewisham; Mr. P. Teale, Leeds; Dr. Sutcliffe, Bradford; Mr. Buckle, Edinburgh; Mr. Berry, Wisbeach; Mr. Lewis, London; Dr. W. Sumpter; Dr. Wiltshire, London; Dr. Ralfe, London; Dr. Blanc, Paris; Mr. Pullman, London; Mr. Gorham, Tunbridge; Mr. Budgett, London; Mr. Draper, Spalding; Dr. Waren, Cairo; Mr. Hindle, Darwen; Mr. Cresswell, Dowlais; Dr. Cleghorn, Allahabad; Dr. Payrer, London; Mr. T. J. Dyke, Merthyr Tydvil; Messrs. Lippincott, Philadelphia; Mr. May, Brockley; Mr. Horder, Alston; Mr. Burness, London; Mr. Eastes, London; Mr. Lero, Epperstone; Dr. Lyle, Exeter; Mr. Hunt, Hull; Mr. Tench, Middlesborough; Mr. T. Davies, London; Dr. Walker, Hanley; Mr. Garside, Ruabon; Dr. Tate, Woodbridge; Mr. Browne, Hull; Dr. Armstrong, South Shields; Mr. Williams, Glasgow; Mr. Dodshon, London; Mr. Wolston, Edinburgh; Mr. Kenyon, Radnor; Mr. Smith, Woodley; Mr. Miller, Stourbridge; Mr. Drummond, Chatham; Mr. Cresswell, Ramsgate; Mr. Walker, London; Mr. Jones, Dowlais; Mr. Date, Crewkerne; Dr. Akerman, London; Dr. Mackinder, Gainsborough; Mr. Chambers, Sheffield; Dr. Flin, Dublin; Mr. Duncon, Liverpool; Mr. Le Page, Newcastle; Mr. Richards, Chirk; Mr. Howsen, Newark; Mr. Wills, Bootle; Mr. Bacot, Blandford; Dr. Currie, Amble; Mr. Etheridge, Teignmouth; Mr. Brown, Tredegar; Mr. Purcell, Nottingham; Mr. Townley, Liverpool; Dr. Collins, Milborne Port; Mrs. Toyne, Beswick; Dr. Lowther, Cartmel; Mr. Burgoyne, London; Mr. Ledman, Hull; Dr. M'Dermott, Blanchlands; Messrs. Cadbury Brothers, Birmingham; Surgeon-Major Moss, Cape Coast Castle; Mr. Glisson, Brynmawr; Mr. Ricketts, Liverpool; Mr. Latham, Hackney; Mr. Tallack, London; Dr. Wrangham, Wragby; Mr. Moore, Hereford; Mr. Wood, Liverpool; Mr. Rodgers, Frome; Mr. Platt, Oldham; Mr. Stephenson, Lancedale; Mr. Smith, Nottingham; Mr. Fox, Manchester; Mr. Kenyon, Bury; Dr. Foster, Birmingham; Mr. Herbert, Uttoxeter; Mr. Procter, Shifnal; Mr. Mason, Carlisle; Mr. Penhall, St. Leonards-on-Sea; Enquirer; The Secretaries of the Early Closing Association; A Country Doctor; Studens; A Constant Subscriber; One who has Passed; A. R. P.; M.D.; House-Surgeon; X., Bradford; An Old Subscriber; Beatrice; X. Y Z.; W. G. R.; F.R.C.S.; A Surgeon; &c. &c.

Newcastle Daily Chronicle, Exchange and Mart Journal, Glasgow Herald, Woolwich Gazette, Welshman, Academy, Parochial Critic, Canada Lancet, South London Journal, Huddersfield Daily Chronicle, Surrey Advertiser, Manchester Guardian, East London Observer, Western Morning News, Hampshire Advertiser, Staffordshire Daily Sentinel, Cork Constitution, Isle of Man Times, Drawing-room Gazette, Saunders's News-Letter, and *Glossopdale Chronicle* have been received.

METEOROLOGICAL READINGS

(*Taken by Steward's Instruments*).

THE LANCET OFFICE, MARCH 26TH, 1874.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8 A.M.
Mar. 20	30·00	N.W.	40	44	...	51	40	...	Fine
" 21	30·18	S.S.E.	41	46	...	55	41	...	Overcast
" 23	30·30	W.	49	51	...	65	49	...	Overcast
" 24	30·35	WNW	44	44	70	59	43	...	Overcast
" 25	30·47	N N E	40	42	81	55	39	...	Fine
" 26	30·42	S.E.	38	39	...	...	37	...	Fine

Medical Diary of the Week.

Monday, March 30.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations on the Eye, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ST. PETER'S HOSPITAL.—3 P.M. Expected Operations: Lithotrity; Subcutaneous Urethrotomy.
MEDICAL SOCIETY OF LONDON.—8 P.M. Dr. Brunton, "On the Therapeutic Use of Aconite," with illustrative Cases.—Mr. Braine will exhibit a new Foot Regulator and Nitrous Oxide Economiser.

Tuesday, March 31.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, April 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
CANCER HOSPITAL.—Operations, 3 P.M.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Discussion on Dr. Playfair's paper "On Puerperal Thrombosis."—Dr. Copeman, of Norwich, "On Consultation Midwifery in Private Practice."—Dr. Sabvia, "On a New Operation for Atresia Uteri."—And other communications.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M.

Thursday, April 2.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
HARVEIAN SOCIETY OF LONDON.—7½ P.M. Meeting of Council.—8 P.M. Dr. R. Farquharson, "On the Effects of Continued Physical Exertion on the Heart and Large Vessels."

Friday, April 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, April 4.

HOSPITAL FOR WOMEN Soho-square.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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For 7 lines and under .....£0 4 6 | For half a page £2 12 0
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Agent for the Advertising Department in France—

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